

AD-A121 195

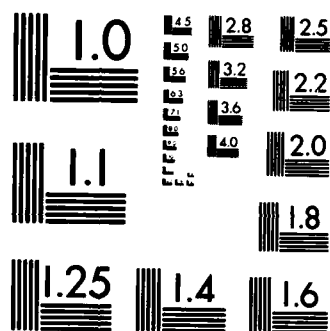
PROPOSED BARGE TERMINAL EXPANSION PACKER RIVER TERMINAL
INC SOUTH ST PAUL DAKOTA COUNTY MINNESOTA(U) CORPS OF
ENGINEERS ST PAUL MN ST PAUL DISTRICT SEP 77

1/2

UNCLASSIFIED

F/G 13/10 NL

NL



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

AD A121195

ENVIRONMENTAL IMPACT STATEMENT

DTIC FILE COPY

DISTRIBUTION STATEMENT A

Approved for public release
Distribution Unlimited

for your reference

①

FINAL

PACKER RIVER TERMINAL, INC.
BARGE TERMINAL EXPANSION

SOUTH ST. PAUL, MINNESOTA

DTIC
ELECTE
NOV 5 1982
S D

SEPTEMBER 1977

82 11 05 024

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER	2. GOVT ACCESSION NO. AD-A121175	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) FINAL ENVIRONMENTAL IMPACT STATEMENT, PROPOSED BARGE TERMINAL EXPANSION, PACKER RIVER TERMINAL, INC., SOUTH ST. PAUL, DAKOTA COUNTY, MINNESOTA.		5. TYPE OF REPORT & PERIOD COVERED Final EIS
7. AUTHOR(s)		6. PERFORMING ORG. REPORT NUMBER
9. PERFORMING ORGANIZATION NAME AND ADDRESS U.S. Army Engineer District, St. Paul 1135 U.S. Post Office and Custom House St. Paul, MN 55101		8. CONTRACT OR GRANT NUMBER(s)
11. CONTROLLING OFFICE NAME AND ADDRESS		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)		12. REPORT DATE September 1977
		13. NUMBER OF PAGES 103
		15. SECURITY CLASS. (of this report) Unclassified
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report) Approved for public release; distribution unlimited.		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) Environmental impact statements Barges Barge terminals		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Packer River Terminal, a subsidiary of Twin City Barge and Towing Co., proposes to expand an existing barge terminal facility in South St. Paul, Minnesota. It proposes to fill approximately 22 acres of wetlands to increase the capacity of the terminal to store and handle an estimated additional 635,000 tons per year. The wetland area, serving water quality, food chain production, general habitat, nesting and rearing habitat and flood storage functions would be lost, and the habitat value of adjacent wetlands would be reduced.		

DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

FINAL
 ENVIRONMENTAL IMPACT STATEMENT
 PROPOSED BARGE TERMINAL EXPANSION
 PACKER RIVER TERMINAL, INC.
 SOUTH ST. PAUL, DAKOTA COUNTY, MINNESOTA

Accession For	
NTIS GRA&I	<input checked="" type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By	
Distribution/	
Availability Codes	
Dist	Avail and/or Special
A	



U.S. ARMY CORPS OF ENGINEERS
 ST. PAUL DISTRICT
 1135 U.S. POST OFFICE AND
 CUSTOM HOUSE
 ST. PAUL, MINNESOTA 55101
 SEPTEMBER 1977

ERRATA

Table 7, page 40

The 1976 figures for Minneapolis should read, from left to right:

427 150 18 1730 0 0 0 0 11 0 0 0 35 2371

The 1976 figures for St. Paul should read, from left to right:

1990 143 0 545 27 0 0 2 6 0 0 35 4 2761

The 1976 figures for the Minnesota River should read, from left to right:

2572 76 0 31 0 0 0 0 0 0 0 0 0 2679

The total 1976 figures should read, from left to right:

4998 369 18 2306 27 0 0 2 17 7 0 0 35 39 7811

Table 8, page 41

The 1976 figures for Minneapolis should read, from left to right:

0 0 14 66 0 3 128 65 0 7 335 48 47 713

The 1976 figures for St. Paul, should read, from left to right:

15 55 87 435 0 76 0 51 7 0 1270 1095 116 3207

The 1976 figures for the Minnesota River should read, from left to right:

0 27 145 773 0 208 0 21 0 0 0 26 20 1220

The total figures should read, from left to right:

15 82 246 1274 0 287 128 137 7 7 1605 1169 183 5140

All these figures are no longer estimates

FOREWORD

This final statement considers the environmental impacts associated with authorization of Federal permits necessary to expand a barge terminal facility in South St. Paul, Dakota County, Minnesota, as proposed by Packer River Terminal, Inc.

After receipt of the Packer permit application, a public notice was issued which described the proposed activity and requested comments from agencies and the interested public on the pending permit. This public notice offered an opportunity to recommend any appropriate conditions that should be placed upon this permit should it be granted, and the opportunity to request a public hearing.

Upon evaluation of the Packer permit application and available information, the District Engineer determined that the proposed project would significantly affect the quality of the human environment. Therefore, in accordance with the National Environmental Protection Act of 1969 (NEPA), a draft environmental impact statement (EIS) was prepared by the St. Paul District, Corps of Engineers. It was circulated to Federal, State, and local agencies and interested groups and individuals, who were invited to review and comment on the document.

After receipt and consideration of comments on the draft statement, the Corps prepared this final environmental impact statement, which includes a discussion of questions and objections raised by the letters of comment, and final analysis of the environmental effects of the facility and the alternatives available for reducing or avoiding adverse environmental effects.

Each of the parties commenting on the draft EIS and receiving the final EIS, or those commenting on the above mentioned public notice, will receive another public notice or clarifying statement regarding final disposition of the Corps permit actions. It is presently anticipated that a final decision with respect to these and other matters pertaining to the applicant's permit requests will be made near the end of calendar year 1977.

This final EIS was prepared to assure compliance with the requirements of the National Environmental Policy Act of 1969 (NEPA). It was prepared in accordance with the requirements of the Department of the Army, Engineers Regulation 1105-2-507 dated 15 April 1974 and Council for Environmental Quality (CEQ) guidelines dated 1 August 1973.

SUMMARY

PROPOSED BARGE TERMINAL EXPANSION
PACKER RIVER TERMINAL, INC.
SOUTH ST. PAUL, DAKOTA COUNTY, MINNESOTA

() Draft Environmental Statement (x) Final Environmental Statement

Responsible Office: St. Paul District, Corps of Engineers
1135 U.S. Post Office and Custom House
St. Paul, Minnesota 55101
Telephone: (612) 725-7505

1. Name of Action: (x) Administrative () Legislative

2. Description of Action: Packer River Terminal, Inc. (Packer), a subsidiary of Twin City Barge and Towing Co., Inc., proposes to expand an existing barge terminal facility in South St. Paul, Minnesota. Packer proposes to fill approximately 22 acres of wetlands to increase the capacity of their terminal to store and handle an estimated additional 635,000 tons of commodities per year.

3. a. Environmental Impacts: Implementation of the project would allow Packer to handle an additional volume and variety of commodities that would reduce the economic risk involved in their terminal operation. Approximately 35 full-time jobs with an annual payroll of \$507,500 would be created with optimum development. An additional 15 jobs in related industries would be created. Annual property taxes resulting from the planned development are estimated at \$48,000.

b. Adverse Environmental Effects: Approximately 22 acres of wetlands serving water quality, food chain production, general habitat, nesting and rearing habitat and flood storage functions would be lost. The habitat value of adjacent wetlands would be reduced. There would be minor degradation of air quality from particulates, hydrocarbons, and carbon monoxide. There would be a minor increase in barge traffic on the Mississippi River and in truck traffic on arterial streets and highways.

4. Alternatives:

- a. No Action (Denial of the permit)
- b. Partial Expansion
- c. Deferment of Expansion
- d. Issue the permit with conditions to minimize adverse effects

5. Comments Requested: See page 64 for a list of those furnished a copy of this draft statement.

- 6. a. Draft Statement to CEQ 20 May 1977.
- b. Final Statement to CEQ _____.

FINAL ENVIRONMENTAL IMPACT STATEMENT
Proposed Barge Terminal Expansion
Packer River Terminal, Inc.
South St. Paul, Dakota County, Minnesota

TABLE OF CONTENTS

	<u>Page</u>
FOREWORD	i
SUMMARY	ii
TABLE OF CONTENTS	iii
INTRODUCTION	1
 1.0 PROJECT DESCRIPTION	 1
Project Purpose	1
Project Authorization	1
Project Background	1
Existing Facilities	7
Main Warehouse	7
Maintenance Building	9
Commodities	9
Proposed Action	13
Dike Construction	13
Detention/Storage Basin	13
Access Roadway	13
Work Areas	16
Controls during Construction	16
Pipeline Reconstruction/Relocation	16
Backwaters Expansion	18
General Cleanup	18
Topsoil Removal/Placement	18
 2.0 ENVIRONMENTAL SETTING	 21
Climate	21
Wind Speed and Direction	21
Air Quality	22
Hydrology	24
Water Quality	28
Vegetation	32
Wildlife	34
Birds	34
Fish	35
Endangered and Threatened Species	35
Recreational Use	35
Land Use/Ownership	36
Historical and Archaeological Values	38
Transportation	39
Socio-Economic Environment	39
Utilities and Public Services	43
 3.0 RELATIONSHIP OF THE PROPOSED PROJECT TO LAND USE PLANS	 43
 4.0 ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION	 48

TABLE OF CONTENTS (CONT.)

	<u>Page</u>
Social Effects	48
Noise Levels	48
Aesthetic Values	48
Historical/Archaeological Values	48
Recreational Values	48
Public Health	49
Transportation	49
Barge Traffic	49
Rail Traffic	51
Truck Traffic	51
Community Cohesion and Growth	51
Population Displacement	51
Economic Effects	51
Natural Resources Effects	52
Air Quality	52
Particulate Emissions	52
Photochemical Oxidants	53
Carbon Monoxide	53
Water Quality	54
Water Pollution Potential	54
Mitigation Measures for Water Quality	57
Drainage Routing	57
Stormwater Storage and Release	57
Runoff Diversion	58
Coverage of Storage Piles	58
Special Methods for Salt Storage	59
Spillage Control Counter-Measures and Contingency Plans	60
Wetlands	60
5.0 UNAVOIDABLE ADVERSE IMPACTS OF THE PROPOSED ACTION	62
6.0 ALTERNATIVES TO THE PROPOSED ACTION	63
No Action	63
Partial Expansion into the Wetlands	63
Deferment of Development	63
7.0 THE RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE OF LONG-TERM PRODUCTIVITY	66
8.0 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES WHICH WOULD BE INVOLVED IN THE PROPOSED ACTION SHOULD IT BE IMPLEMENTED	66
9.0 COORDINATION	66
LETTERS OF COMMENT AND CORPS RESPONSES	
TECHNICAL APPENDIX	

TABLE OF CONTENTS (CONT.)

FIGURES

<u>Number</u>	<u>Title</u>	<u>Page</u>
1	Location of Packer Property	2
2	Packer Project as Proposed on 24 June 1974	3
3	Property Packer Plans to Donate to South St. Paul	5
4	Section 404 Line Denoting Extent of Wetlands on Packer's Property	6
5	Existing Facilities as of 1 April 1977	8
6	Illegal Fill Placed in the Fall of 1976	12
7	Proposed Expansion	14
8	Features of the Proposed Fill	15
9	Pipeline Relocation	17
10	Mitigation Proposal	19
11	Topsoil Removal/Placement	20
12	Drainage Area	25
13	Vegetation Map	33
14	Land Ownership	37
15	Barge Terminals in Metropolitan Area	42
16	Industrial Area - South St. Paul	44
17	Partial Expansion	65

TABLES

<u>Number</u>	<u>Title</u>	<u>Page</u>
1	Capacity of Existing Facility	10
2	Projected Commodity Shipments with Project	18
3	Air Quality Standards	23
4	Runoff Coefficients for Quantity/Quality Analysis of Proposed Packer River Terminal Development (Mississippi River Mile 831)	29
5	Water Quality Data - Mississippi	30
6	Chemical Analysis of Sediment from Station Located on the Open Channel Receiving Drainage from Sub-Area A	31
7	Metropolitan Area Barge Traffic Shipments (1972-1976)	40
8	Metropolitan Area Barge Traffic Receipts (1972-1976)	41
9	Employment Losses/Gains (1969-1976)	47
10	Best Case Increase in Barge Traffic	50
11	Worst Case Increase in Barge Traffic	50
12	Potential Particulate Emissions (lb/day)	53
13	Annual Loadings from Urban Land Reported in the Literature	56

FINAL
ENVIRONMENTAL IMPACT STATEMENT
PROPOSED BARGE TERMINAL EXPANSION
PACKER RIVER TERMINAL, INC.
SOUTH ST. PAUL, DAKOTA COUNTY, MINNESOTA

INTRODUCTION

The purpose of this statement is to assess the environmental impacts associated with the expansion of a barge terminal facility in South St. Paul, Minnesota.

1.0 PROJECT DESCRIPTION

PROJECT PURPOSE

1.1 The purpose of the project is to expand a recently constructed barge terminal facility in South St. Paul by Packer River Terminal, Inc., a wholly owned subsidiary of Twin City Barge and Towing Co., Inc., of St. Paul, Minnesota. The project is located at Mississippi River mile 831.6, approximately .2 mile downstream of the I-494 bridge (figure 1).

PROJECT AUTHORIZATION

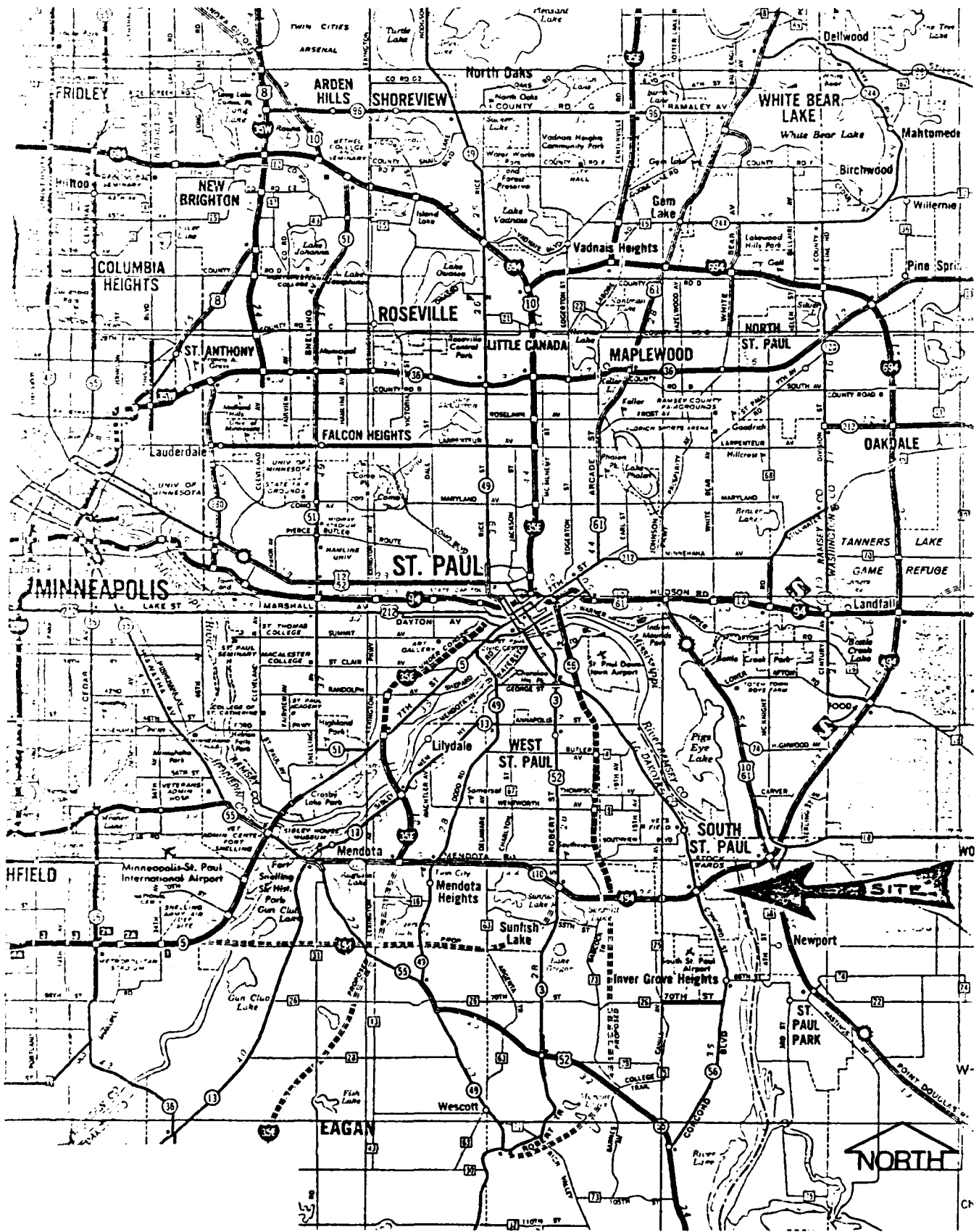
1.2 Packer River Terminal, Inc. (Packer), submitted a permit application on 16 October 1975 (St. Paul District, Corps of Engineers permit application number - A751) for the filling of wetlands adjacent to the Mississippi River. A Department of the Army (DOA) permit is required by Section 404 of the Federal Water Pollution Control Act Amendments of 1972 (Public Law 92-500, 86 Stat. 816, 33 U.S.C. 1344).

1.3 This final environmental impact statement was prepared at the direction of the District Engineer in accordance with the National Environmental Policy Act of 1969 (Public Law 91-190) and DOA Engineering Regulation 1105-2-507.

PROJECT BACKGROUND

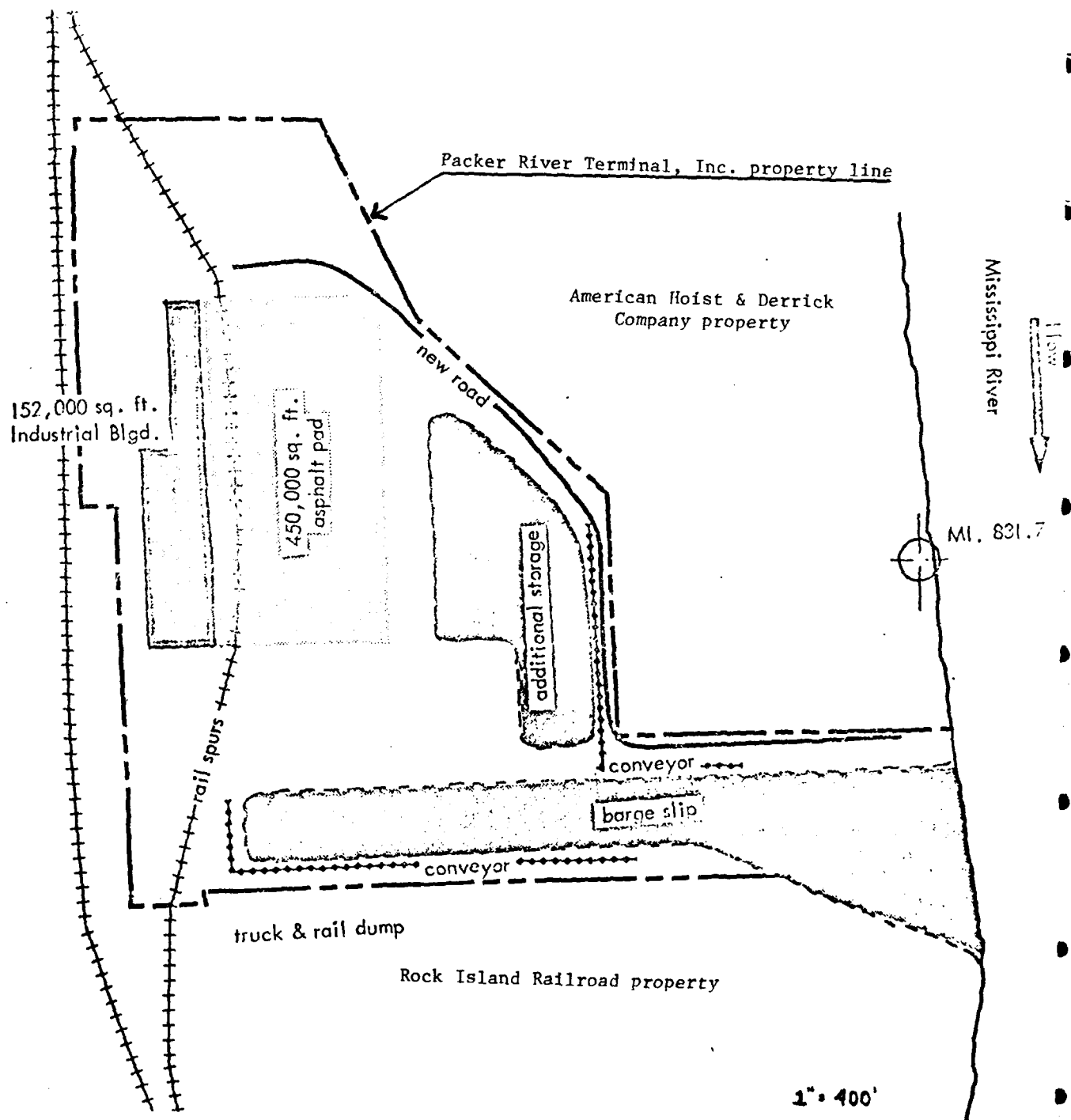
1.4 On 24 June 1974 Packer applied to the St. Paul District, Corps of Engineers (Corps) for a DOA permit under Section 10 of the River and Harbor Act of 1899 (30 Stat. 1151; 33 U.S.C. 403) to excavate a barge slip and develop a barge terminal facility on their property in South St. Paul. A 152,000-square-foot aluminum on steel industrial warehouse and an adjacent 450,000-square-foot asphalt pad already existed on the property at that time. Figure 2 depicts the project as proposed at that time.

1.5 A public notice of the proposal was issued on 12 September 1974. At that time the Corps only exercised jurisdiction under Section 404 of P.L. 92-500 to the ordinary high water mark of the Mississippi River. Thus, even though the proposed project involved some filling



Location of Packer Property

Figure 1



Packer Project as Proposed on 24 June 1974

Figure 2

of wetlands (about 9 acres), no Section 404 permit was required.

1.6 On 7 January 1975 the U.S. Department of Interior (DOI) recommended that the permit application be denied based primarily upon the destruction of wetlands involved in the proposal. The DOI recommended that Packer consider alternative siting of the barge slip and that Packer explore the possibility of presenting open space lands to the city of South St. Paul as a compensatory measure for damages resulting from the project.

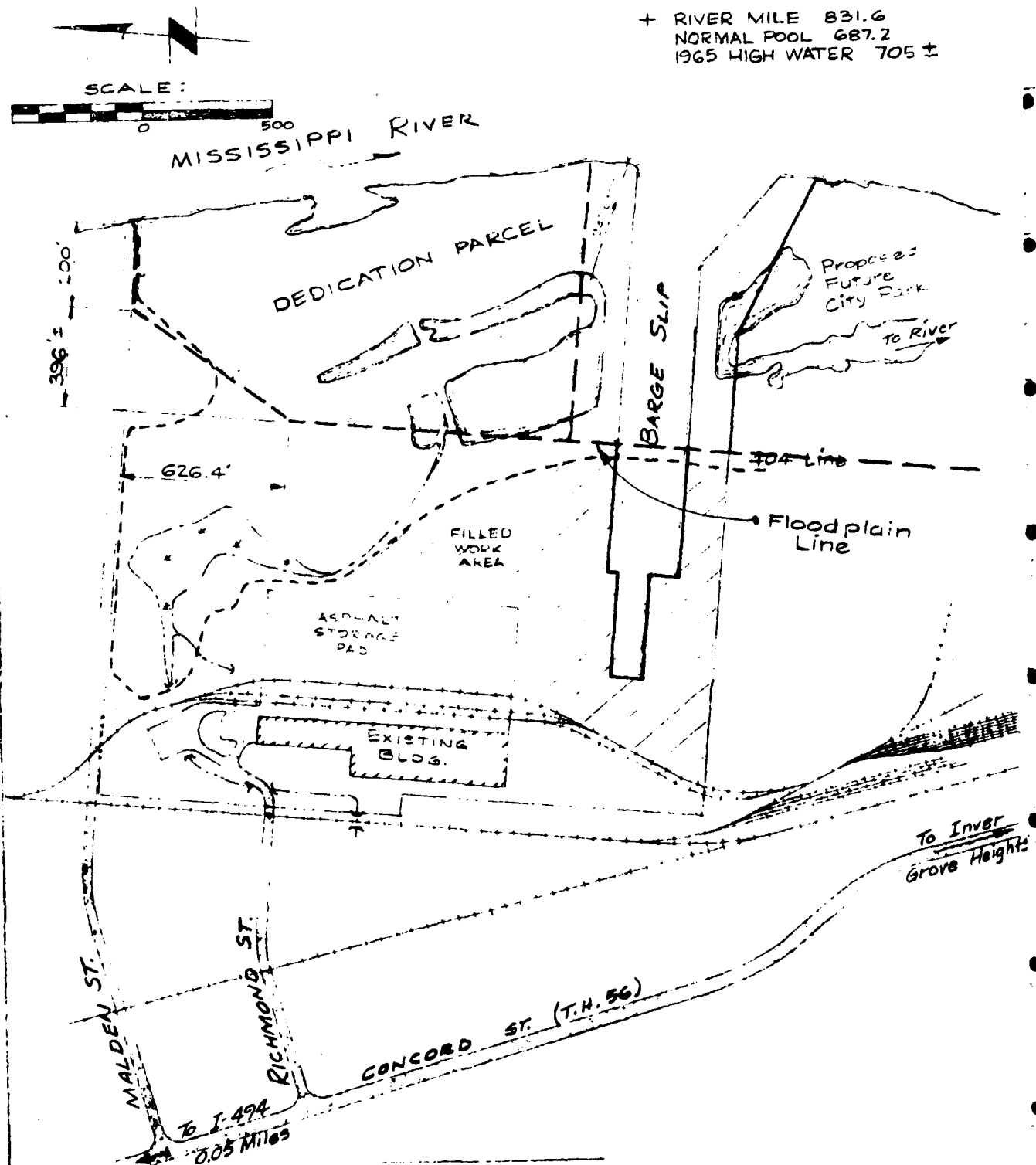
1.7 Packer was informed that the St. Paul District Office could not issue a permit at the district level over the objections of the Department of the Interior. If the objections of the DOI could not be resolved, the application would be forwarded to North Central Division in Chicago for resolution with the District Engineer's recommendations.

1.8 In March 1975 the U.S. District Court for the District of Columbia ruled that the Corps of Engineers was to expand their regulatory jurisdiction under Section 404 of P.L. 92-500 and to promulgate new regulations in conjunction with the U.S. Environmental Protection Agency. Of particular impact upon the Packer proposal at that time was the fact that Corps of Engineers regulatory jurisdiction under Section 404 would now encompass wetlands on Packer's property.

1.9 At the time of the court decision, it was not known to what extent the wetlands involved in the Packer proposal would come under Section 404 jurisdiction. Packer was informed of the court ruling and of the fact that it would not be known if a Section 404 permit would be required for the proposed wetland fill until the new regulations were published.

1.10 On 19 May 1975 Packer informed the Corps that they had taken options to purchase an adjacent tract of about 50 acres owned by American Hoist and Derrick Company (figure 2) and planned to donate approximately 28 acres riverward of the Minnesota Department of Natural Resources (DNR) floodway line to the city of South St. Paul for open space use (figure 3). On 20 May 1975 the DOI informed the Corps that they had reviewed Packer's proposal to dedicate this property and were removing their objections to issuing the Section 10 permit to Packer.

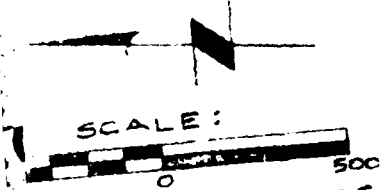
1.11 On 28 May 1975 the EPA stated that they would not object to the issuance of the Section 10 permit, provided no fill would be placed in any wetland area on the Packer property without authorization under Section 404 of P.L. 92-500. On 3 June 1975 Corps and EPA personnel visited the Packer site and mapped out the wetlands on the Packer property. The wetlands on the Packer property cover the area riverward of the "404 line," as shown on figure 4. Packer was informed that to fill riverward of this line would require a Section 404 permit.



Property Packer Plans to Donate to South St. Paul

Figure 3

+ RIVER MILE 831.6
NORMAL POOL 687.2
1965 HIGH WATER 705 ±



MISSISSIPPI RIVER

Original Section 10 Project
Property Line Limits

BARGE SLIP

404 Line

FILLED
WORK
AREA

ASPHALT
STORAGE
PAD

EXISTING
BLDG.

To Inver
Grove Heights

MALDEN ST.

RICHMOND ST.

CONCORD ST. (T.N. 56)

To I-494
0.05 Miles

Section 404 Line Denoting Extent of Wetlands on Packer's Property

Figure 4

1.12 On 25 July 1975 Packer was granted a Section 10 permit to excavate their proposed barge slip and develop their terminal. A condition placed upon that permit was that no fill be placed riverward of the Section 404 line, as shown in figure 4.

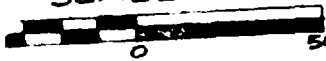
Existing Facilities

1.13 A warehouse, asphalt pad, and maintenance building presently exist on the site (figure 5). These structures are described in more detail below:

1.14 Main Warehouse: Large ribbed aluminum on steel industrial building containing an estimated 152,000 square feet with a maintenance and repair building containing an estimated 3,018 square feet, on a tract of land consisting of approximately 38 acres "usable" and an additional 41.86 acres of marginal river bottom land.

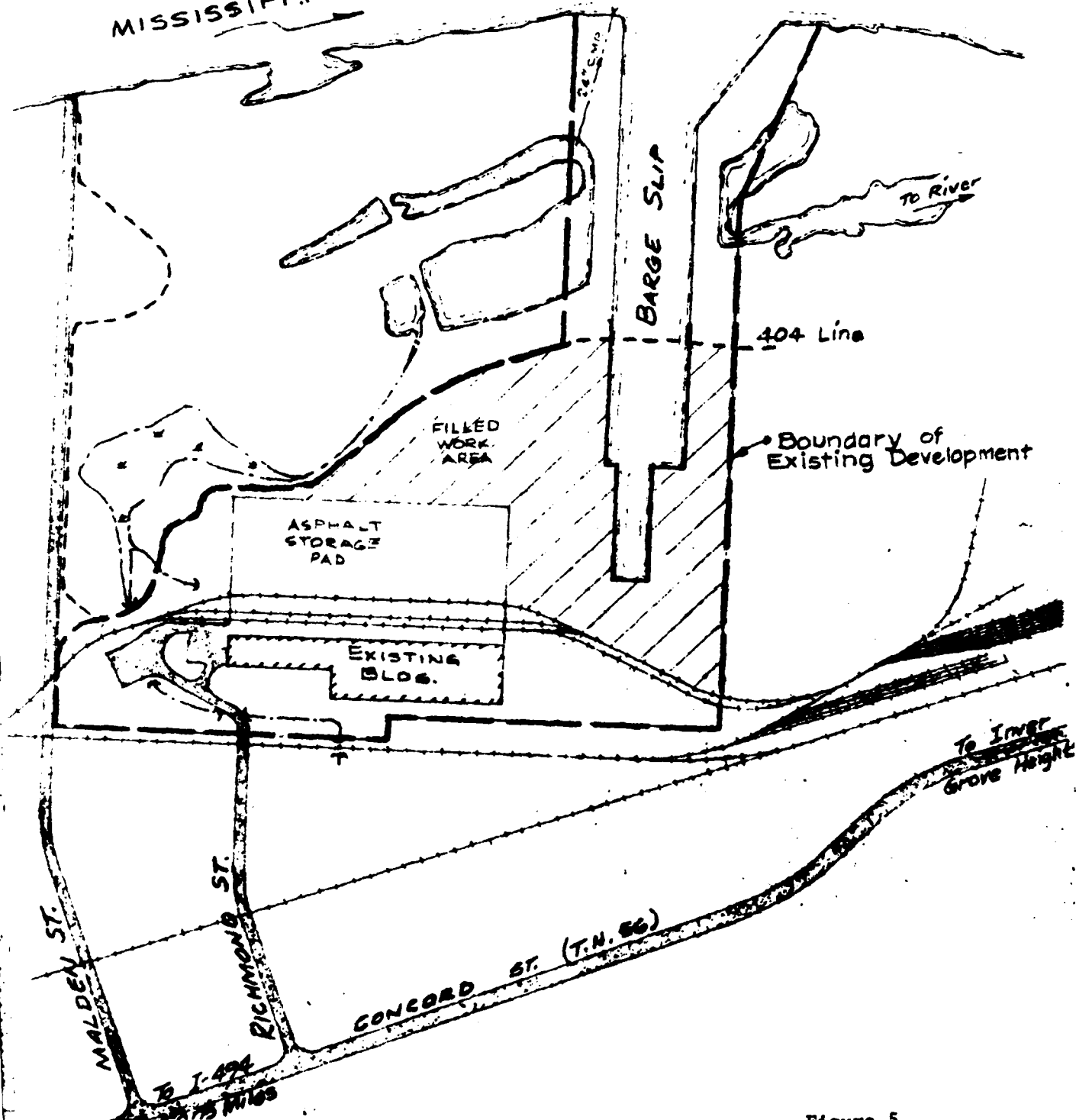


SCALE:



+ RIVER MILE 831.6
NORMAL POOL 687.2
1965 HIGH WATER 705 ±

MISSISSIPPI RIVER



Existing Facilities as of 1 April 1977

Figure 5

1.15 Maintenance Building: Divided into two basic structures, has Gasgote 40 gallon automatic electric water heater, single-compartment slop sink, Halsey Taylor drinking fountain, radiant heating, fluorescent lighting, overhead crane, concrete floor, overhead roll-up doors electrically operated, gas-fired suspended unit heater, overhead crane, metal building with concrete block foundation and concrete floor. Three railroad spurs of 6,000 feet are in place with 200 x 940-foot transfer aisles, 10.6 x 20-foot fire pump house with individual 400-amp. service, stucco exterior, shed-type built-up roof. The improved portion of the property is surrounded by a chain-link fence 6 feet in height, approximately 1,860 lineal feet in length, with gates controlled from central tower for trackage access. Packer has recently completed excavation of the barge slip and has filled much of the Section 10 project area.

Commodities

1.16 Packer has not obtained any long term commitments from tenants or users of the terminal facility. Listed below is the most likely mix of commodities to be transported through the facility. These figures are based on existing needs and demands evidenced by shipping tonnages and personal discussions between Packer and potential users of the terminal.

Table 1
Capacity of Existing Facility

<u>Commodity</u>	<u>Tons/Yr.</u>
Grains, Grain Products	1,000,000
Fertilizers	200,000
Coal, Coal Products	1,000,000
Salt	50,000
Processed Scrap	50,000
Bldg. Products	25,000
Others*	225,000
	<u>2,550,000</u>

* Minerals, sugar beet pellets, chemicals, cement, paper products, etc.

1.17 Grain, Grain Products: There are two potential areas for such facilities. The first is on the south side of the existing building. The second site, on the south side of the barge slip, is encumbered by an NSP "highline" easement, with 35-foot height limitations. It may not be possible to utilize this area. It is anticipated that up to 1,000,000 tons per year of such products could be handled.

1.18 Fertilizers: There is a potential for use of the existing building on the site for receiving phosphates, shipped in by barge and shipped out by rail and/or truck. There is also a potential for shipment of Canadian potash and bulk urea to the site, in by rail and out by barge. This commodity would be handled as follows:

- * Storage (existing building--150,000 square feet) is inclosed.
- * Materials barged in would be unloaded by a crane and clam and conveyed to the building. Trans-shipment would be by portable conveyor to trucks and/or rail cars.
- * Material which is truck- or rail-delivered for storage would be unloaded to the building by portable conveyor. Stored materials would be conveyed to barges for shipment. Direct truck or rail to barge transfer will be available also.
- * Capacity potential for fertilizer products is approximately 200,000 tons/year.

1.19 Sugar Beet Pellets: This commodity would be delivered by truck or rail, and shipped out by barge. Handling would be by portable conveyor to the existing building, or separate storage silo, and then by conveyor to barge, as noted above. Capacity for this product could be up to 400,000 tons per year. Such use could possibly preclude use of site for fertilizer handling, depending on mechanical demands and available site space.

1.20 Coal and Coke Products: There is a great demand for this product in the entire river basin. The vast majority of this product would be western coal brought in by train. Facilities could include storage bunkers/silos. Receiving would be by rail to inclosed rail dump, with conveyance to the storage in an inclosed system. The coal would be discharged to barges by an inclosed conveyor system, with telescoping discharge chute and water or chemical spray systems. The quantity of coal handled is extremely difficult to estimate at this time. Best estimates would indicate approximately one million tons per year would be handled.

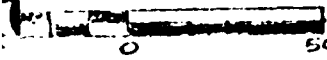
1.21 Road Salt: Facilities for handling this product are in great demand in this area. Facilities would include inclosed or covered storage, barge delivery, and trans-shipment to truck or rail. Storage facilities would be approximately 25 feet high. It is anticipated that on-site storage, via the present project, would accommodate approximately 50,000 tons per year.

1.22 Miscellaneous: This category would include minerals, chemicals, cement, iron and steel, building products, etc. The type of storage and handling facilities required would be dependent upon the properties of the commodity. General handling would likely be by crane from truck or rail to barge, or from barge to truck or rail. The work/storage areas near the dock and at the northern portion of the filled work area would be utilized in this handling process. Portions of the existing building may also be used at times. It is estimated that approximately 300,000 tons of these commodities would be handled each year. The applicant has had contact with, or been contacted by, well over 100 potential tenants or users of the facility. These contacts represent over 25 different commodity/ market areas which depend upon the availability of river access for all or part of their product shipments. The terminal has previously handled bulk paper products, road salt, lumber products, fertilizers, feed products, etc., and continues to perform such services.

1.23 During the excavation of the barge slip in the fall of 1976, Packer constructed low-level dikes across the backwater areas along the north and south sides of the barge slip and installed a 24-inch CMP culvert on the north side of the slip from the backwater to the Mississippi River (figure 6). These structures were put in place at the request of the U.S. Fish and Wildlife Service and the Minnesota DNR to prevent turbid waters caused by the dredging operation from entering these backwaters. Technically, this construction was in violation of some of the conditions of the Section 10 permit. As the construction was done to minimize the impacts of slip excavation and apparently resulted from a misinterpretation of the permit conditions, the Corps decided not to take legal action, provided Packer apply for an after the fact permit for the activities. Packer has done so and the application is being processed at this time.



SCALE:



+ RIVER MILE 831.6
NORMAL POOL 687.2
1965 HIGH WATER 705.2

MISSISSIPPI RIVER

(3) Interconnect
Backwater

(2) Over-flow Culvert

(1) Dike Construction

10+ Line

FILLED
WORK
AREA

ASPHALT
STORAGE
PAD

EXISTING
BLOG.

BARGE SLIP

To Inver
Grove Height

CONCORD ST. (T.H. 56)

To I-494
Exit 163

Illegal Fill Placed in the Fall of 1976

Figure 6

PROPOSED ACTION

1.24 Packer proposes to expand their present operation by filling approximately 22 acres of wetlands adjacent and riverward of the present facilities (figure 7). The primary features include a 2,000-foot dike, a runoff detention basin, access roadway, and approximately 370,000 square feet of work area.

1.25 Following is a description of the construction efforts that would be involved in the preparation of the area for use.

Dike Construction

1.26 The dike as shown in figure 8 would be approximately 2,000 feet long and would involve the placement of approximately 63,000 cubic yards of clay and topsoil materials. The area would be cleared and grubbed, with debris hauled away. After a period of one year or so (to allow for settlement), the top would be leveled to elevation 705. Topsoil materials would be placed on the slopes of the dike and hydraulically seeded. At present, Packer proposes to seed with grasses and legumes. Packer would consult with the Minnesota DNR before a final seeding plan is developed. A 24-foot service road, constructed with on-site crushed rock materials, would be placed on the top of the dike for repair, maintenance and emergency access purposes. A chain-link fence would be placed on the eastern side of the service road around the proposed detention pond and to the west along the south side of Malden Street. Fencing would also be placed along the slip and the southern and western property lines. The fencing would not isolate the detention pond in order to allow wildlife access to the pond area.

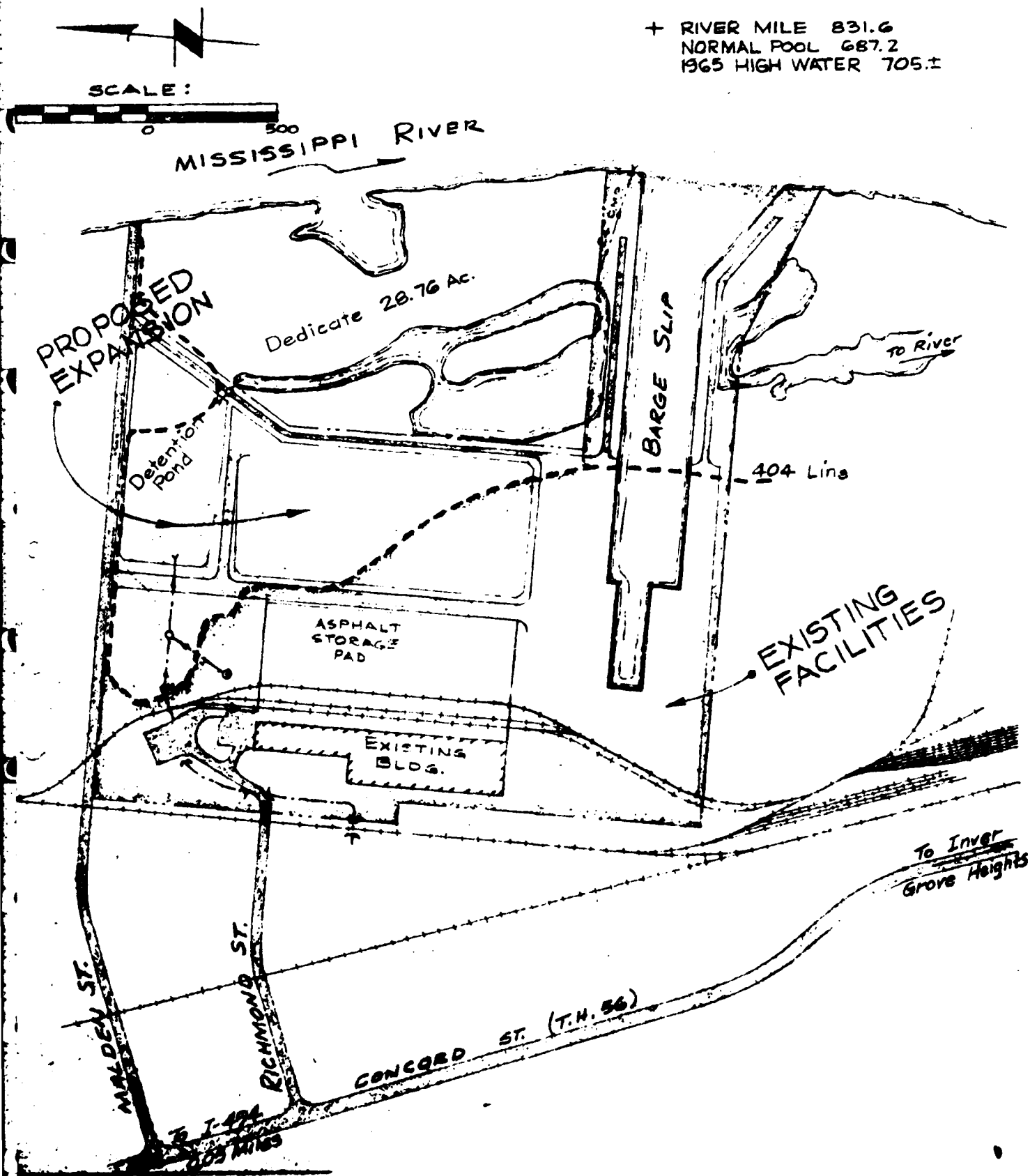
Detention/Storage Basin

1.27 A 7.6-acre surface drainage storage detention basin would be constructed as shown in figure 8. The floor of the basin would be excavated to elevation 685+ (normal river pool is 687.2) to maintain a wet condition to support aquatic vegetation. The pond could fill to elevation 696 at a minimum; which is the elevation of the work area to the immediate south. Pond slopes would be topsoiled and hydraulically seeded.

1.28 A 42-inch reinforced concrete pipe storm drain will carry off-site drainage (from the west) to the basin. This pipe would intercept the on-site drainage system presently being designed for the applicant's site. An overflow system is presently being designed to penetrate the dike along the eastern side of the detention pond. The design of the overflow is intended to incorporate a siphon principle and to operate such that siltation and flotation action occur in the basin and that operation of the overflow does not disturb these processes under design flow conditions. The backwater area adjacent to the overflow will be riprapped to prevent erosion and disturbance of bottom materials in this area. A State Disposal System and/or NPDES permit may be required for this facility.

Access Roadway

1.29 The access roadway on the western edge of the detention basin, from Malden Street, would be constructed of clean fill materials



Proposed Expansion

Figure 7

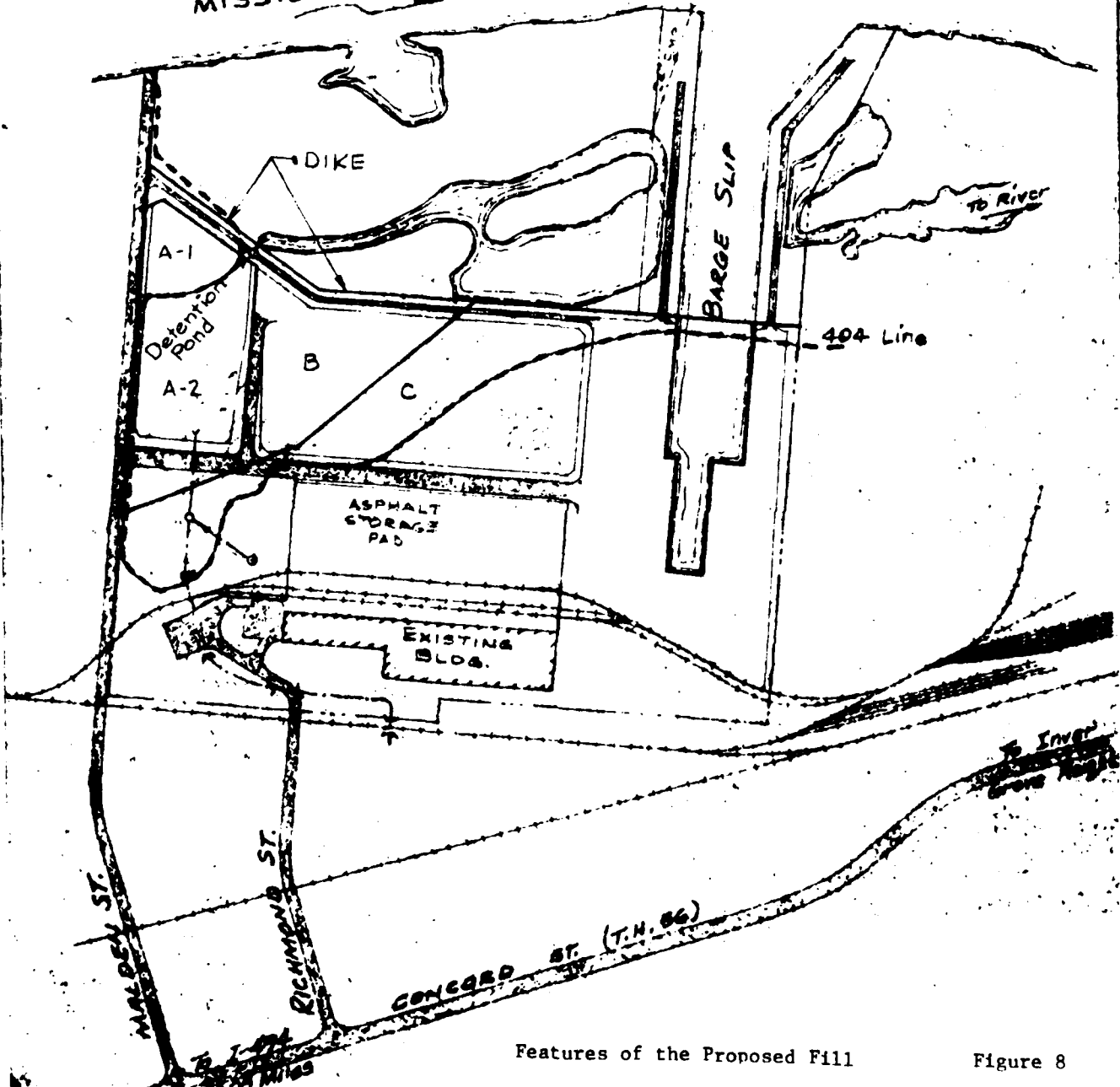
PARCEL	ACREAGE
A-1	2.15
A-2	5.46
B	7.55
C	8.96
TOTAL	24.12

21.97 Acres (404 Area)

+ RIVER MILE 831.6
NORMAL POOL 687.2
1965 HIGH WATER 705.2



MISSISSIPPI RIVER



Features of the Proposed Fill

Figure 8

to an elevation of approximately 705 MSL. The driven surface would include a crushed rock base (on-site materials) and bituminous pavement. All slopes would be topsoiled and hydraulically seeded. Clean fill for this roadway is available on the site. The paved roadway surface would be approximately 60 feet wide to provide both access and egress, and on-site vehicular storage for operating purposes. Fill material required is approximately 25,000 cubic yards.

Work Areas

1.30 The work area west of the detention basin would be filled with clean fill materials to an elevation of approximately 705 to match existing road and railroad trackage grades. Initially, a crushed rock surface would be placed on the fill, and pavement materials placed as tenant use dictates. Approximately 95,000 cubic yards of fill materials from offsite sources would be required for this area.

1.31 The work area south of the detention basin would likely be retained at a filled elevation of 696, or 9 feet lower than the existing property to the south and west, and the top of the dike (which is at elev. 705). Access to this area would be via the roadway shown along the south side of the detention basin. Approximately 110,000 cubic yards of fill material would be required for this area: 83,000 cubic yards from on-site and 27,000 cubic yards from off-site sources.

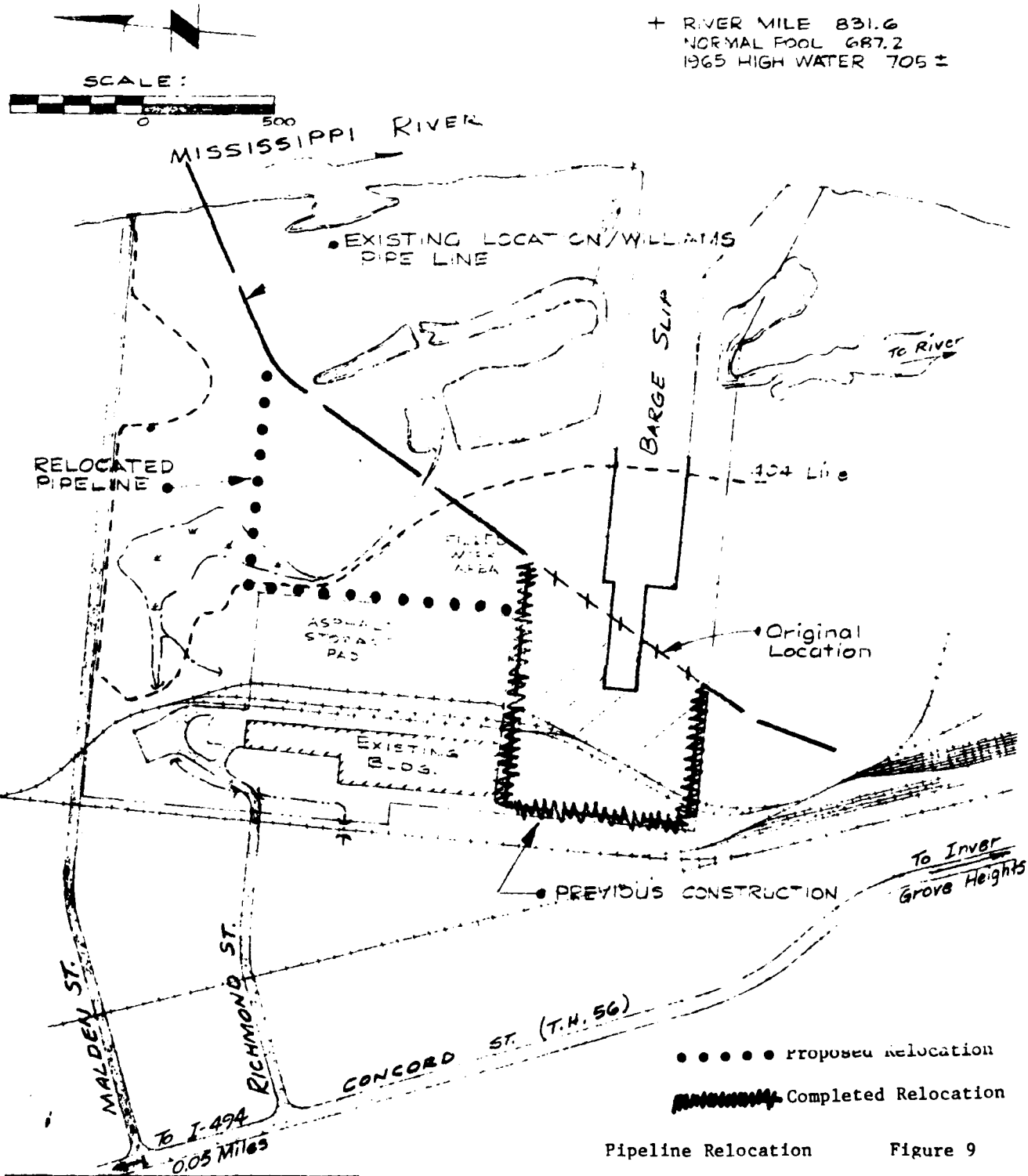
1.32 Approximately 185,000 cubic yards of off-site fill would be required. Packer proposes to obtain the material from the Kamesh and Sons pit on Booth Avenue in Inver Grove Heights, about 2 miles west of the Packer property.

Controls During Construction

1.33 The primary environmental concern during construction would be particulates generated during earthmoving activities. This will be minimized by keeping the area "wetted down," i.e., the paved areas are wetted and swept periodically. During earthmoving operations, the work areas would be graded to contain runoff and prevent silt and earthen materials from being deposited in the backwaters. Early construction of the proposed dike, including topsoil and seeding, would facilitate this effort.

Pipeline Reconstruction/Relocation

1.34 The Williams Pipeline Co. maintains and operates pipelines (petroleum products) across the applicant's property under an easement dating back to 1931. There are three pipelines on the easement: two 6-inch lines and one 12-inch line, spaced 3 feet on centers. According to Williams' representatives, the 6-inch lines are so old that they must be repaired or replaced soon. The applicant and Williams have agreed to reconstruct their lines as noted in figure 9. The existing easement agreement also allows the applicant to have access to this pipeline for petroleum products.



1.35 The lines would be constructed utilizing standard utility trenching methods. Materials include coated steel pipelines at a minimum 3-foot depth to top of pipe, protected from corrosion by a cathodic protection system presently in existence. The pipelines would be shut down individually during the reconnection phase to prevent loss or spill of product.

Backwaters Expansion

1.36 Packer proposes to do some work in the parcel of property designated for dedication to the city of South St. Paul. This work is designed to mitigate some of the adverse impacts associated with the proposed project.

1.37 Packer intends to utilize conventional earthmoving equipment to enlarge the existing backwaters in the parcel to be dedicated, as shown on figure 10. This would replace approximately 3.18 acres of backwater surface area removed through development. The excavation in the backwaters area would be to a depth which matches the average depth of the adjacent water areas.

General Cleanup

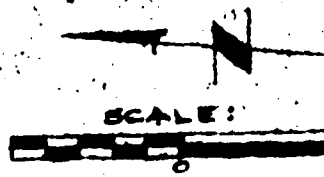
1.38 The applicant also proposes to conduct a general cleanup of the parcel to be dedicated. This would include removal of fallen trees and general refuse which has been dumped in the area over the years.

Topsoil Removal/Placement

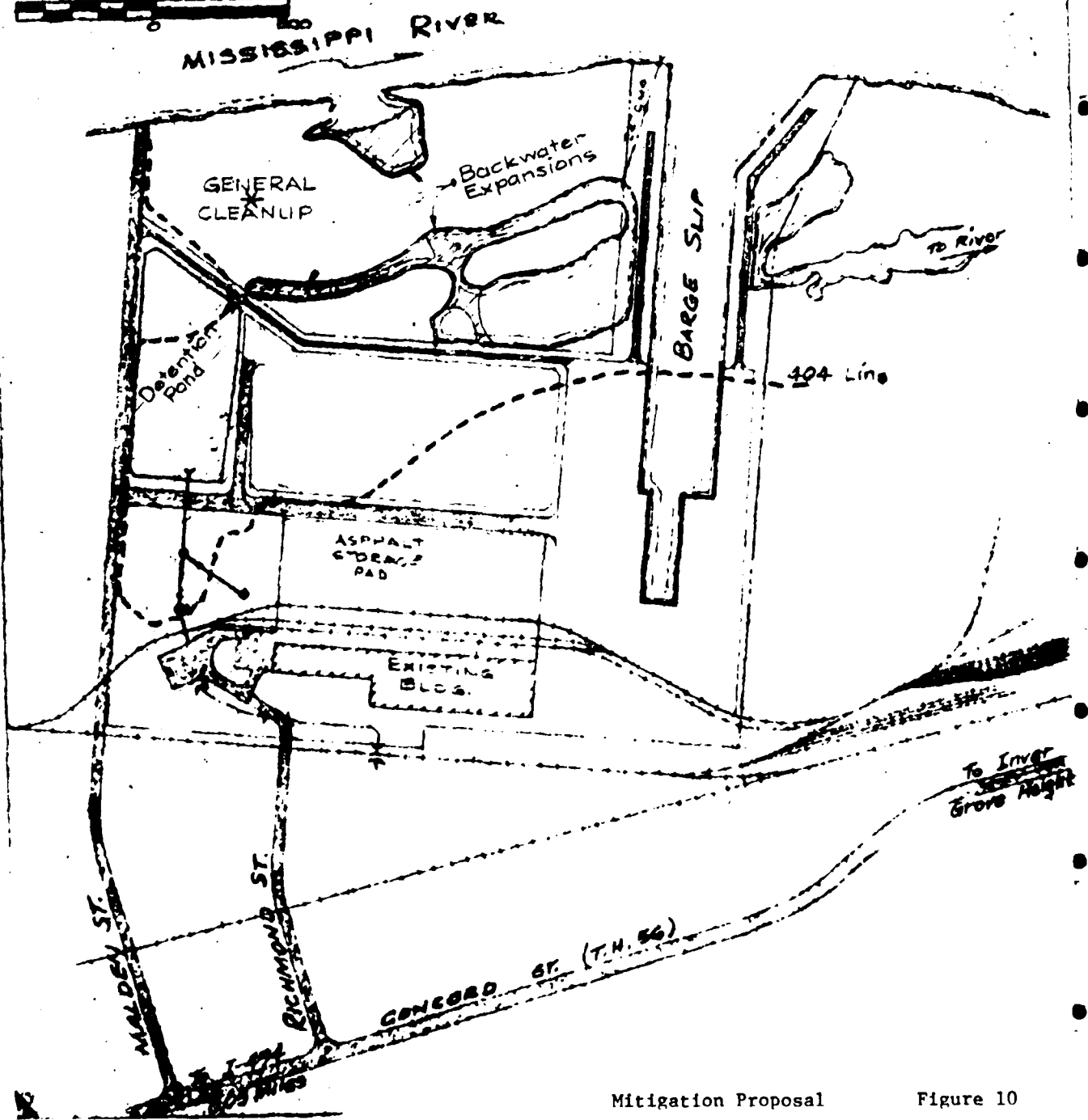
1.39 Figure 11 indicates areas where existing topsoil would be salvaged for placement in the detention pond and expanded backwaters areas. The salvaged topsoil is from that portion of the wetlands area where development is proposed and where aquatic vegetation is most likely to exist at present. This topsoil would be placed, as noted, to perform the function of sealing the bottom of the expanded wetlands and/or to support regrowth of vegetation in these areas.

1.40 Packer estimates that the additional space provided by the filled areas would allow them to handle an additional 635,000 tons of material (shown in the table below).

<u>Table 2</u>	<u>Present</u>	<u>"404"</u>	<u>Total</u>
<u>Commodity</u>	<u>Project</u>	<u>Additions</u>	<u>Development</u>
	<u>(tons/yr.)</u>	<u>(tons/yr.)</u>	<u>(tons/yr.)</u>
Grains, Grain Products	1,000,000	-----	1,000,000
Fertilizers	200,000	-----	200,000
Coal, Coal Products	1,000,000	-----	1,000,000
Salt	50,000	50,000	100,000
Processed Scrap	50,000	50,000	100,000
Building Products	25,000	50,000	75,000
Petroleum, Petroleum Prod.	-0-	85,000	85,000
Sand/Aggregates	-0-	100,000	100,000
Others	<u>225,000</u>	<u>300,000</u>	<u>525,000</u>
TOTALS:	2,550,000	635,000	3,185,000



+ RIVER MILE 831.6
NORMAL POOL 687.2
1965 HIGH WATER 706 ±

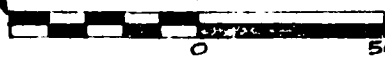


Mitigation Proposal

Figure 10



SCALE:



+ RIVER MILE 831.6
NORMAL POOL 687.2
1965 HIGH WATER 705 ±

MISSISSIPPI RIVER

TOPSOIL PLACEMENT

BARGE SLIP

TO RIVER

404 Line

FILLED
WORK
AREA

ASPHALT
STORAGE
PAD

TOPSOIL REMOVAL/SALVAGE
(Approx. 3.18 Acres)

EXISTING
BLOG.

To Inver
Grove Height

MALDEN ST.

RICHMOND ST.

CONCORD ST. (T.H. 56)

to I-494

0.05 Miles

Topsoil Removal/Placement

Figure 11

1.41 Packer estimates that the construction phase (1 year) would employ 40 people and that an additional 35 employees would be needed in the operation of the facility.

2.0 ENVIRONMENTAL SETTING

CLIMATE

2.1 The primary factors affecting the climate of the Twin Cities metropolitan area are the movements of the continental polar air masses intermingled with warm, moist air masses from the Gulf of Mexico. These features tend to produce extremes in climatic conditions.

2.2 The air quality of a given location is directly affected by the meteorological characteristics of the area. Thus, air pollution in the vicinity of the proposed development is related to the localized capacity of the atmosphere to transport and disperse pollutants. The primary meteorological parameters which determine this capacity are wind direction, wind speed, atmospheric stability, and mixing heights. Atmospheric stability near ground level is affected by surface roughness and solar heating. The optimum condition for dispersion of emissions from a ground-level source consists of a higher degree of ventilation, combined with a relatively unstable atmosphere. Conversely, atmospheric mixing is minimal in the presence of a ground-based temperature inversion. Temperature and precipitation are needed to determine average soil moisture content, which affects the potential for fugitive dust emissions. This information is also necessary for use in describing hydrologic and water-quality phenomena. The Minneapolis/St. Paul International Airport is the nearest first-order meteorological station. The airport is located 15.6 kilometers (10 miles) west of South St. Paul.

WIND SPEED AND DIRECTION

2.3 The land in the Twin Cities metropolitan area has, for the most part, the character of a slightly growing plateau. The movement of air masses across the area is relatively unimpeded. The wind speed average is just over 10 miles per hour with little variation from month to month. The prevailing winds are from the northwest in the winter and from the southeast in the summer. Lower wind speeds are more frequent at night, occurring at less than 8 miles per hour from 40 to 50 percent of the time. The prevailing direction of winds of less than 8 miles per hour is southwest in the winter and southeast in the summer.

2.4 The topographic features in the vicinity of the Packer River Terminal site have an effect upon the meteorological phenomena of the area. The facility is located in the Mississippi River Valley. The river flows in a north-south direction. Therefore, air flowing in a direction parallel to the river valley may be channeled to the

direction of air movement in the valley. In addition to the alteration of the wind direction, the river valley may alter the wind speeds from those recorded at the airport. It would be expected that the wind speeds would be increased when the direction is parallel to the valley and decreased when it crosses the valley.

2.5 Temperature inversions usually occur at night, and more frequently in the winter when the sky is clear and the wind speed is low. A clear sky allows the earth's surface to radiate and cool at a fast rate, thereby cooling the air near the surface. The cool air at the surface is then restricted from vertical mixing with the warmer air above it. The Twin Cities metropolitan area has a high percentage of cloudcover over half of the winter. This minimizes the formation of low-level, nighttime inversions.

AIR QUALITY

2.6 This section describes the existing air quality in the vicinity of Packer River Terminal. The discussion focuses upon the air pollutants associated with the facility. The pollutants are total suspended particulates (TSP) or dust that could be emitted during the operation and carbon monoxide, photochemical oxidants, hydrocarbons, and nitrogen oxides which could be emitted from the motor vehicles operating in and around the facility, as well as from the storage of petroleum products on the site.

2.7 The Minnesota Air Quality Standards are shown in table 3. Primary air quality standards denote the concentration limits which protect public health. Secondary standards are needed to protect public welfare.

Ambient Air Quality - Total Suspended Particulates

2.8 There were two ambient air quality monitoring stations near the proposed development. The first, Minnesota Pollution Control Agency Station No. 817, is located in St. Paul in the vicinity of Pig's Eye Lake. It is approximately 3 miles north of the project site. The Pig's Eye monitoring station is located in an area that is influenced by several area sources of particulates. Included are fill sites, adjacent unpaved roads and railroad yards. The major point source of particulates is the Metropolitan Sewer Board plant at Pig's Eye. Planned controls on this plant will substantially reduce its particulate emissions by 1982. However, this may or may not reduce levels at the Pig's Eye monitoring station. For the period from January through November 1976, the annual geometric mean recorded at this station was 84 micrograms per cubic meter. The 24-hour peak recording was 302 micrograms per cubic meter and the second highest 24-hour recording was 252 micrograms per cubic meter.

2.9 The second station, Minnesota Pollution Control Agency Station No. 430, (terminated in November, 1976) was located in St. Paul Park across the river. This station was approximately 1 mile south of the proposed development, located in an urban area above the river valley. The most recent recording for this station for January through November 1976 was 50 micrograms per cubic meter (annual geometric mean). The two highest 24-hour readings were 133 and 124 micrograms per cubic meter.

Table 3

MINNESOTA AMBIENT AIR QUALITY STANDARDS

Pollutant	Wording of Standards	Primary Standard	Secondary Standard
Total suspended particulates	Max. annual geometric mean. Max. 24-hr. concentration not to be exceeded more than once per year.	75 $\mu\text{g}/\text{m}^3$ 260 $\mu\text{g}/\text{m}^3$	60 $\mu\text{g}/\text{m}^3$ 150 $\mu\text{g}/\text{m}^3$
Sulfur Oxides	Max. annual arith. mean. Max. 24-hr. concentration not to be exceeded more than once per year. Max. 3-hr. concentration not to be exceeded more than once per year.	.02 ppm (60 $\mu\text{g}/\text{m}^3$) .10 ppm (260 $\mu\text{g}/\text{m}^3$) .25 ppm (655 $\mu\text{g}/\text{m}^3$)	.02 ppm (60 $\mu\text{g}/\text{m}^3$) .10 ppm (260 $\mu\text{g}/\text{m}^3$) .25 ppm (655 $\mu\text{g}/\text{m}^3$)
Carbon Monoxide	Max. 8-hr. average not to be exceeded more than once per year. Max. 1-hr. concentration not to be exceeded more than once per year.	9 ppm (10 mg/m^3) 30 ppm (35 mg/m^3)	9 ppm (10 mg/m^3) 30 ppm (35 mg/m^3)
Photochemical Oxidants	Max. 1-hr. average not to be exceeded more than once per year	.07 ppm (130 $\mu\text{g}/\text{m}^3$)	.07 ppm (130 $\mu\text{g}/\text{m}^3$)
Hydrocarbons (less Meth.)	Max. 3-hr. concentration (6:00 to 9:00 A.M. not to be exceeded more than once)	.24 ppm (160 $\mu\text{g}/\text{m}^3$)	.24 ppm (160 $\mu\text{g}/\text{m}^3$)
Nitrogen Oxides	Max. annual arith. mean.	.05 ppm (100 $\mu\text{g}/\text{m}^3$)	.05 ppm (100 $\mu\text{g}/\text{m}^3$)
Hydrogen Sulfide	1/2 hr. average not to be exceeded over two times per year for primary standard. 1/2 hr. average not to be exceeded over two times in any five consecutive days for secondary standard.	.05 ppm (70 $\mu\text{g}/\text{m}^3$)	.03 ppm (42 $\mu\text{g}/\text{m}^3$)

2.10 Both reporting stations have reached, or exceeded, the secondary air quality standard. The Pig's Eye station is in violation of the primary annual ambient air quality standards.

Transportation-Related Pollutants

2.11 Motor vehicles are a major source of air pollution in urban areas. According to the Minnesota Pollution Control Agency Implementation Plan of 1971, 10 percent (by weight) of the particulates, 3 percent of the sulphur dioxide, 56 percent of the nitrous oxides, 97 percent of the carbon monoxide, and 78 percent of the hydrocarbons emitted in the Minneapolis/St. Paul Air Quality Control Region (AQCR) are from transportation sources.

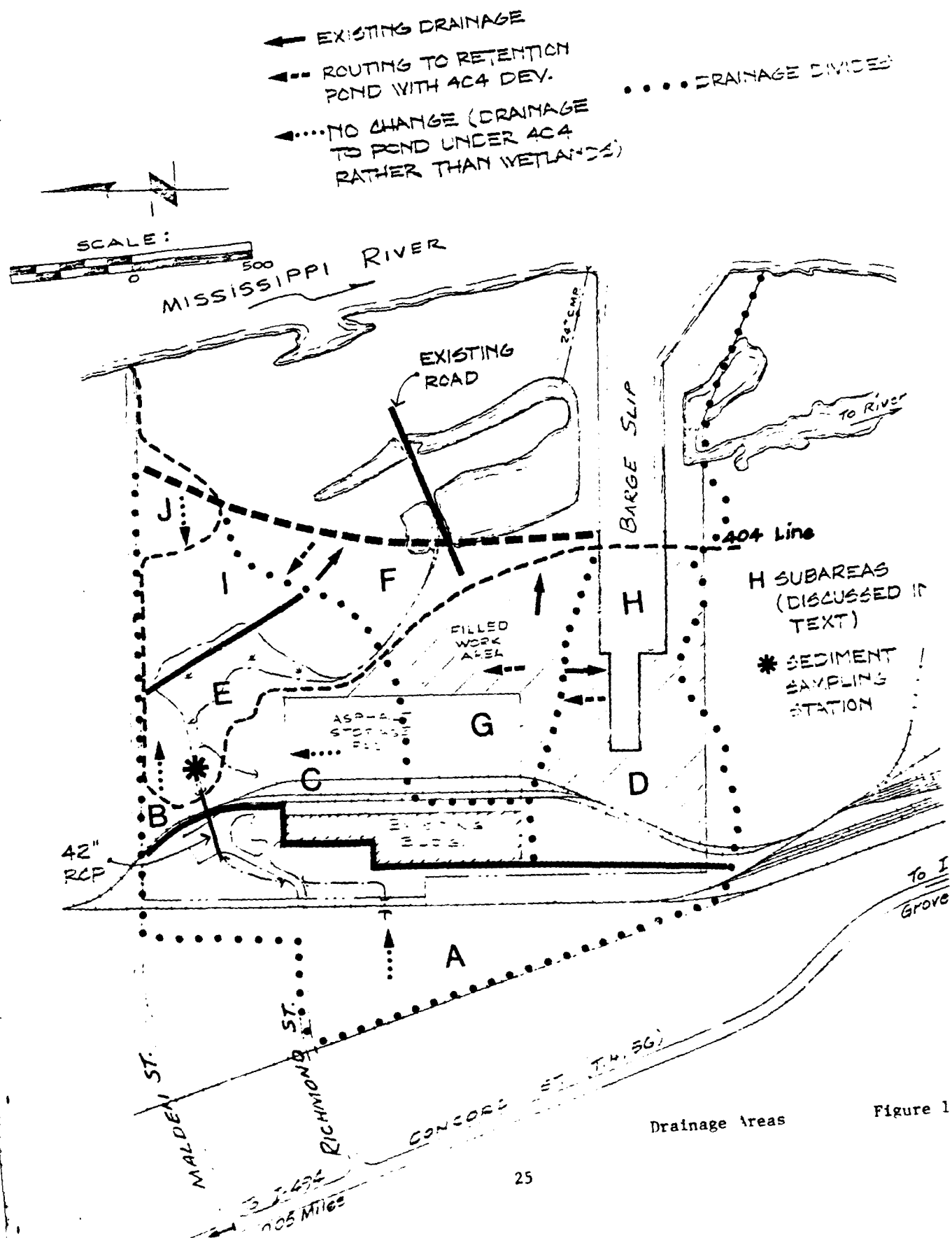
2.12 Hydrocarbons and nitrogen oxides are precursors to the formation of photochemical oxidants. At present, the analytical capability for simulating the complex interrelationships among hydrocarbons, nitrogen oxides, ambient aerosols, humidity, and sunlight does not permit a detailed analysis of the potential impact of the proposed 404 land development on oxidants. Oxidants, as precursors, do pose an ambient air quality problem, however, for the Minneapolis/St. Paul Air Quality Control Region.

2.13 Carbon monoxide is a transportation-related pollutant that exhibits localized impact characteristics. The metropolitan area estimated background concentrations of carbon monoxide for 1975 are 6.4 ppm for one hour and 2.1 ppm for an 8-hour average.

HYDROLOGY

2.14 In order to characterize the study area in terms of basic hydrology and water quality considerations, the drainage area was divided into sub-areas to facilitate discussion and analysis. The sub-area divisions (A through J) are shown on figure 12. Each sub-area is discussed individually in the following paragraphs. In this discussion, the abbreviations C_e and C_u refer to the coefficients of runoff for each of the sub-areas. C_e and C_u , respectively, are defined as follows:

1. C_e is the runoff coefficient estimated for each sub-area under current or existing conditions. Existing conditions include the level of development permitted to Packer River Terminal under Section 10 of the Rivers and Harbors Act.
2. C_u is the runoff coefficient estimated for each sub-area under future or ultimate conditions. Ultimate conditions include the level of development proposed for those lands riverward of the 404 line, as well as additional development within the upstream drainage area tributary to the Packer River Terminal site.



Drainage Areas

Figure 12

2.15 Sub-area A - Sub-area A includes approximately 27.3 acres of partially developed industrial land. About 12.8 acres of this land are outside of the Packer River Terminal site. Runoff from the sub-area is entirely overland flow, which enters a narrow drainage ditch through a 42-inch reinforced concrete pipe culvert (see figure 12). This ditch discharges to the marsh described in a following section. Stormwater and snow-melt runoff from this sub-area receive a combination of physical and biological treatment due to passage through the marsh. Such drainage would be routed through the retention pond if the proposed action were implemented.

2.16 About 4.4 acres of the 12.8 acres of Sub-area A (34.4 percent) outside of the Packer River site are currently undeveloped. Development of this parcel may be realistically expected within the near future. The C_e (existing coefficient of runoff) for Sub-area A has been estimated as 0.43. Based upon the development anticipated in the future, the C_u (ultimate coefficient of runoff) for the sub-area is estimated to be 0.49.

2.17 Sub-area B - Sub-area B includes an area of 1.7 acres of on-site drainage area which is landward of the 404 line and contributes overland runoff directly to the drainage ditch discharging to the marsh. This parcel includes impervious surfaces consisting of access roads to the on-site buildings and a portion of Malden Street to the centerline. The sub-area, as developed, is considered relatively impervious and is assigned a C_e of 0.9. It would remain unchanged as a result of the proposed action and, therefore, the C_u would also be 0.9. Stormwater and snow-melt runoff receive treatment due to passage through the marsh. Such drainage would be routed through the retention pond if the proposed action were implemented.

2.18 Sub-area C - Sub-area C includes 12.8 acres landward of the 404 line which currently drain to the marsh either directly by overland flow or to the drainage ditch by way of a tributary channel located on the north side of the existing building. This sub-area includes the existing buildings and approximately half of the existing loading pad and rail yard. All of these surfaces are relatively impervious and would remain so under the proposed action. Therefore, $C_e = C_u = 0.9$. Drainage from this sub-area currently passes through the marsh and would be routed through the retention pond if the proposed action were implemented.

2.19 Sub-area D - Sub-area D includes 10.7 acres of Section 10 lands currently under development. The natural drainage of this sub-area is toward the barge slip. Historically, therefore, it has received some natural detention treatment afforded by overland flow. Under the proposed action, this runoff would be routed to the retention pond for treatment. The coefficient of runoff would not change appreciably with development of the 404 lands, since the Section 10 development would be completed in this area. C_e is estimated as 0.7 and C_u would be approximately the same.

2.20 Sub-area E - Sub-area E includes 14.6 acres within the 404 lands proposed for development. Existing runoff from the sub-area is to the drainage ditch or directly to the marsh by overland flow. The proposed action would include development of the retention basin over about one-fifth of this sub-area, while the remainder would be utilized for loading and transfer facilities. With a C_e of about 0.2, the C_u (due to the development of the 404 lands) has been estimated as about 0.6. All runoff from the sub-area would be routed to the retention pond.

2.21 Sub-area F - Sub-area F includes 11.2 undeveloped acres of land riverward of the 404 line and present tributary to the outlet channel of the marsh and/or to the backwater of the Mississippi. Consequently, treatment of this runoff is limited to that afforded by overland flow detention. The proposed action would include routing of drainage through the retention basin. It is expected that with an assigned C_e of approximately 0.2, the development of this sub-area would result in a C_u of about 0.9.

2.22 Sub-area G - Sub-area G, approximately 9.4 acres landward of the 404 lands, is currently under development. Drainage from this sub-area has historically been similar to Sub-area F in that drainage is overland to the outlet channel from the marsh and/or the backwater of the Mississippi. Since this area is under development, upon completion the C_e would be 0.9. The proposed action will not result in additional development and, therefore, C_u would also be 0.9. The proposed action would, however, include the routing of runoff to the retention pond.

2.23 Sub-area H - Sub-area H includes the 17.2 acres of the site which have been utilized for construction of the barge slip. Direct precipitation onto this sub-area will enter the Mississippi River. Since no action would be taken in this sub-area affecting the long-term quantity or quality of runoff, this sub-area is not analyzed further.

2.24 Sub-area I - Sub-area I is 6.1 acres in size and is included in those undeveloped lands riverward of the 404 line. This sub-area presently drains west to the marsh by overland runoff. Runoff, therefore, is exposed to the physical and biological treatment processes of the marsh. Approximately half of this sub-area would be utilized for the proposed retention facility while loading and transfer facilities would be developed over the remainder of the sub-area. With a C_e estimated at 0.2, development would result in a C_u of about 0.75. All runoff from the sub-area would ultimately be routed to the retention pond.

2.25 Sub-area J - Sub-area J is located in the extreme northeast corner of the site. It includes a diseased tree-burning site operated by the city of South St. Paul. Portions of this sub-area are within the 404 lands (in the area to be dedicated) and portions have not been included in the 404 designation. All drainage from this sub-area does, however, flow overland to the marsh. Under

the proposed action, a dike would be constructed through this sub-area. With a C_e estimated at 0.45, this development would result in a C_u of about 0.9. Runoff would be diverted to the retention facility, rather than the existing marsh.

2.26 Summary - Based upon the foregoing discussion, the runoff coefficients are summarized in table 4. The composite values were developed to serve in preliminary hydraulic calculations through which the water quality-related aspects of the proposed action may be addressed.

WATER QUALITY

2.27 The Packer property is located adjacent to the Mississippi River. This stretch of the river has low water quality, as the river has just passed through the metropolitan area. The Metropolitan Waste Water Treatment Plant is 3.75 miles upstream of the Packer property.

2.28 Table 5 below contains water quality data taken at river mile 826, about 5.6 miles below the Packer site, and data taken 9.4 miles above the Packer site at river mile 840.

2.29 Sub-area A drains through the wetland proposed for filling. The water entering the wetland has not been sampled. However, sediments have been deposited at this point (figure 12). These sediments have been analyzed and the results are shown in table 6.

TABLE 4
RUNOFF COEFFICIENTS FOR QUANTITY/QUALITY ANALYSIS OF PROPOSED PACKER RIVER TERMINAL
DEVELOPMENT (MISSISSIPPI RIVER MILE 831)

Sub-Region	Acreage	% Total	C _e	C _u	Composite C _e	Composite C _u
A	27.3	23	.43	.49	.20	.11
B	1.7	1	.90	.90	.02	.01
C	12.8	11	.90	.90	.17	.10
D	10.7	9	.70	.70	To barge slip	.06
E	14.6	13	.20	.60	.04	.08
F	11.2	10	.20	.90	To barge slip	.09
G	9.4	8	.90	.90	To barge slip	.07
H	17.2	15	1.00	1.00	To barge slip	To barge slip
I	6.1	5	.20	.75	.02	.04
J	5.4	5	.45	.90	.04	.05
	116.4	100%			.49	.61

Table 5
Water Quality Data - Mississippi River

Parameter*	(March 75-Aug 76) Mile 826				(Aug 73-Aug 76) Mile 840			
	# of samples	mean	max	min	# of samples	mean	max	min
Temperature (°C)	38	11.9	25.0	0.0	38	11.9	25.6	0.0
Turbidity (FTU)	35	10.8	27.0	2.9	55	11.8	61.0	1.8
Secchi Disk (in)	33	25.7	68.0	8.0	33	24.4	72.0	5.0
Conductivity (umHo)	37	425.4	610.0	270.0	57	397.9	730.0	240.0
pH	37	7.9	8.2	7.5	57	8.0	8.5	7.2
Diss. Oxygen	38	8.8	13.6	2.7	58	9.8	14.7	5.0
BOD ₅	23	6.3	13.3	2.7	43	3.7	9.9	.5
Total Alkalinity	27	176.7	210.0	120.0	47	174.5	230.0	120.0
Hardness	31	208.6	260.0	160.0	51	207.4	270.0	160.0
Oil-Grease	35	1.4	15.0	.5	36	1.4	7.8	.5
Nitrate - N	38	1.16	11.0	.01	57	1.09	8.5	.01
Ammonia - N	38	.76	2.6	.20	57	.22	1.2	.05
Total - P	38	.35	.7	.06	58	.23	1.9	.10
Total Organic C	37	11.76	24.0	5.40	40	10.55	20.0	5.0
Chloride	31	23.61	45.0	12.0	51	16.19	82.0	6.4
Sulfate	26	35.45	83.0	9.2	45	39.90	72.0	20.0
Arsenic	19	.006	.010	.001	34	.008	.010	.001
Cadmium	36	.010	.025	.010	58	.010	.019	.010
Chromium	36	.010	.070	.020	38	.004	.030	.001
Copper	36	.018	.170	.010	58	.012	.055	.010
Iron	36	.637	2.000	.037	58	1.059	5.400	.130
Lead	36	.013	.071	.010	58	.017	.032	.010
Manganese	36	.137	.310	.010	58	.149	1.100	.010
Nickel	36	.011	.019	.010	58	.010	.016	.010
Zinc	36	.233	7.400	.010	58	.095	3.700	.010
Selenium	21	.002	.005	.001	36	.002	.009	.001
Mercury	21	.0005	.0029	.0001	36	.0003	.0019	.0001
Phenols	36	.007	.032	.002	39	.006	.040	.002
Total Coli /100 ml	37	80,612	1,300,000	270	57	13,812	79,000	210
Fecal Coli /100 ml	38	7,900	130,000	20	58	1,996	13,000	70

* All results in mg/l unless otherwise noted

TABLE 6
CHEMICAL ANALYSIS OF SEDIMENT FROM STATION LOCATED ON THE OPEN CHANNEL
RECEIVING DRAINAGE FROM SUBAREA A

Constituent	Concentration (in ppm)
Lead (as Pb)	16
Zinc (as Zn)	79
Mercury (as Hg)	< 0.001
Phenols	< 0.1
COD	29,400
Phosphorus (as P)	< 0.1
Pesticides*	
DDE	0.003
Op' DDT	0.001
Pp' DDT	0.001
DDT	0.004
Dieldrin	0.002
Heptachlor epoxide	0.002

*All other pesticides, including PCB's and PBB's, are below detectable limits.

VEGETATION

2.30 The Packer property riverward of the 404 line is typical floodplain forest interspersed with sloughs and marshes. Figure 13 contains a vegetation map of the site. The following is a discussion of the various habitat types found on the property.

2.31 Area A - Area A (Type I wetland) consists of 3.5 acres with scattered, mature cottonwoods (Populus deltoides) as the tree cover and little or no understory. The ground cover is a mixture of grasses and herbs with smartweed (Polygonum sp.), dock (Rumex sp.), and various grasses (Graminae) most prevalent. Area A would be entirely filled.

2.32 Area B - Area B (Type I wetland) is a dense stand of pole size black willow (Salix nigra) with little or no understory and sparse groundcover. Area B is 1.3 acres and would be entirely filled.

2.33 Area C - Area C is a marsh that maintains some water during dry years. It would be classified as a Type III-IV wetland using the classification scheme of U.S. Fish and Wildlife Circular 39. The marsh is about one-half emergent vegetation and one-half open water, with a balanced distribution of open water and vegetated areas.

2.34 The two most prominent species of plants in the marsh are cattails (Typha sp.) and three-corner sedge (Cyperus sp.). Also found in various places are softstem bulrush (Scripus validus) burreed (Sparganium sp.), sedges (Carex sp.), swamp milkweed (Asclepias incarnata), and rushes (Juncus sp.). Area C is 2.7 acres and would be entirely filled.

2.35 Area D - Area D (Type I) has a dense stand of young trees, primarily willows (Salix sp.) with some cottonwoods, box elder (Acer negundo) and red maple (A. rubrum) present. Ground vegetation is primarily grasses with some herbs present. Area D is 6.3 acres and would be almost entirely filled.

2.36 Area E - Area E (Type I) is a typical floodplain forest composed of mature trees with little understory. The stand on the Packer property is primarily made up of black willows. There are scattered mature cottonwoods present throughout the area. About 8.0 acres of Area E would be filled.

2.37 Area F - Area F is outside the 404 line and is not a wetland area. This area has been filled in the past and is covered by herbs typical of disturbed areas. Some of the more common species are thistles (Cirsium sp.), evening primrose (Oenothera biennis), goose-foot (Chenopodium hybridum), curly dock (Rumex crispus), and mullen (Verbascum thapsus).

2.38 Area G - Area G (Type IV) consists of backwater sloughs that fluctuate in water depth from 1 to 4 feet during the growing season. Emergent vegetation found on the fringes of the open water is primarily arrowhead (Sagittaria latifolia), cattails, and sedges. About .2 acre of Area G would be filled.



Figure 13 Vegetation Map

WILDLIFE

2.39 The floodplain forest along the Mississippi River in the metropolitan area supports a variety of species. The most common mammals found are white-tailed deer (Odocoileus virginianus), red fox (Vulpes fulva), raccoon (Procyon lotor), cottontail rabbit (Sylvilagus floridanus), gray squirrel (Sciurus carolinensis), skunks (Mephitis mephitis), muskrat (Ondatra zibethicus) and numerous small mammals such as ground squirrel, mice, voles, moles and shrews.

2.40 The Mississippi River valley is rich in birdlife, primarily because it is the main stem of the Mississippi Flyway and within a region where eastern and western ornithological ranges overlap. Over 280 species of birds have been reported in the Twin Cities area.

2.41 The wildlife value of the Packer site has been reduced by the Section 10 activities. The barge slip has isolated the area from the floodplain forest corridor to the south. The filling of the uplands landward of the 404 line has reduced the diversity of available habitat.

2.42 No wildlife surveys have been conducted on the site. The following is a discussion of the value of the habitat present for various groups of wildlife.

2.43 Large Game - White-tailed deer could be expected to be present on the site at various times. Deer generally require a fairly extensive range for food and cover. The barge slip creates a physical barrier which limits deer movement to and from the site. While they may make some use of the site, the overall value of the habitat for deer is low.

2.44 Furbearers - The site provides good to very good habitat for furbearers such as muskrat, skunk, raccoon, and red fox. As with the white-tailed deer, the development of the Section 10 facility will restrict movements by these species to and from the floodplain forest south of the Packer property.

Birds

2.45 Ruffed grouse (Bonasa umbellus) and pheasant (Phasianus colchicus) have been observed on the site. The habitat value of this site for grouse is low, primarily because of the lack of aspen and birch, which are the prime winter food source (buds) for these birds. Pheasant habitat has been reduced because of the covering of the upland by the Section 10 fill. The value of the site for pheasant would be considered low to moderate.

2.46 A heron rookery is located on Pig's Eye Lake about 4 miles upstream of the site. Species using this rookery include great blue heron (Ardea herodias), black crowned night heron (Nycticorax nycticorax), and American egret (Casmerodius albus). The project area receives considerable use by great blue herons from the Pig's Eye rookery.

2.47 Although no surveys have been conducted, the wetlands on the Packer site undoubtedly provide habitat for a number of songbirds. The diverse habitat available provides niches for marsh species, bottomland forest species and "edge" species.

2.48 Waterfowl - The Packer property contains very good habitat for puddle ducks such as mallard (Anas platyrhynchos), blue-winged teal (Anas discors) and woodduck (Aix sponsa). Habitat is provided by the Type III-IV marsh (Area 6) and two backwater sloughs totaling about 6 acres of open water.

Fish

2.49 The Mississippi River offers a diverse habitat for fish life. However, the poor water quality in pool 2 substantially reduces the number of species that utilize the reach of the river fronting the Packer property. This reach of the river presently supports a large population of carp (Cyprinus carpio).

2.50 The 5.4-acre Type III-IV wetland in the proposed fill area offers marginal northern pike (Esox lucius) spawning habitat. Northern pike can reach the marsh to spawn because spring flood waters on the Mississippi often provide the fish with relatively easy access to the marsh. However, any fingerlings produced by spawning efforts would find it difficult if not impossible to return to the Mississippi River. A road cutting across the site blocks the easy return of fish to the Mississippi River when water levels fall below 691.7 msl. A culvert exists through this road, but it is unknown whether it is free of debris or blocked so that fish cannot pass through.

Threatened and Endangered Species

2.52 No threatened or endangered species of flora or fauna are known to be present at the site (exhibit 1).

RECREATIONAL USE

2.53 Currently there is little recreational use associated with the project site. Before Packer began construction the site was primarily used by bow fishermen shooting carp in the backwater sloughs.

2.54 There is little likelihood that the site would receive much usage in the future, even though Packer proposes to allow public access to the dedicated parcel of land. The area appears to be best suited for bow fishing and bird watching. The mosquito-producing ability of the area and the presence of the sewage lagoons adjacent to the site do not add to the attractiveness of the area for recreational usage.

LAND USE/OWNERSHIP

2.55 The project site is in an area zoned for heavy industry. The industrial area in South St. Paul is generally defined as the area between Concord Street and the Mississippi River. This area has been reduced for expansion purposes by the establishment of a floodplain line by the Minnesota DNR. This limits the type of activity that can occur in the Mississippi River floodplain.

2.56 Figure 14 depicts land ownership around the Packer property. Following is a discussion of the properties in the immediate vicinity of the Packer property.

a. Old Sanitary Landfill (vacant)

The site is owned by the Dart Transit Co. The area is about 11.0 acres and is vacant. Zoning is heavy industrial. Access is provided by Malden Street and the western edge of the property is flanked by the C & NW and Rock Island tracks. The site is level, with Rockton sandy loam soils. Flooding is controlled by a floodwall which surrounds the sewage treatment plant.

b. Thru Blu and Twin City Hide and Fur Company

These two companies, located northwest of the Packer River Terminal site, are closely linked to the meat packing industry. Each completes a different step in the tanning of hides. Access is provided by Malden Street and the eastern edge of these properties is flanked by the C & NW and Rock Island tracks. These sites are also underlain with Rockton sandy loam soils.

c. Cenex (formerly Farmers' Union Oil Coop)

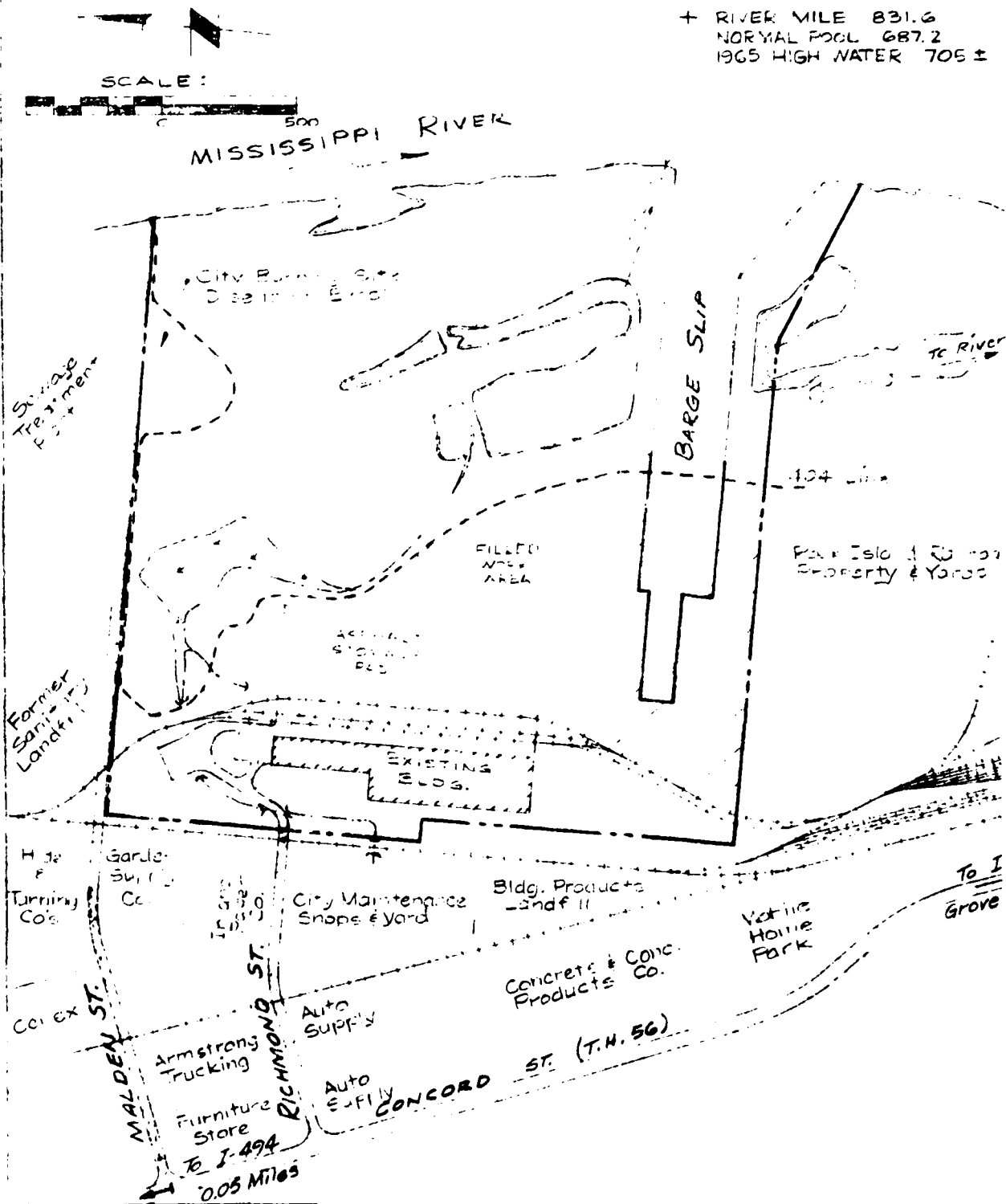
This company is located west of the previously discussed industries and is involved in the storage and distribution of oil. It is truck oriented.

d. Garden Supply Co. and Inland Paper

The area between Malden and Richmond Streets (west of Packer River Terminal site) is about 4.4 acres. It is zoned for heavy industry. The northeast quadrant of the site is occupied by a storage building of Schumacher Garden Supply. South of this facility, Inland Paper has constructed a plant for the cutting of paper stock. Access to the area is by Malden Street and Richmond Street. The C & NW tracks border the property on the east edge. The site is level and composed of Rockton sand soil. It is protected from flooding.

e. City Maintenance Shop/Yard

South of Richmond Street, the city of south St. Paul has constructed a facility for both routine and nonroutine maintenance of city vehicles, primarily trucks. Access to the facility is by way of Richmond Street. This site is also level and underlain by Rockton sandy loam soil.



Land Ownership

Figure 14

f. Building Products Landfill (vacant)

This site, about 5 acres in size, is currently vacant and zoned for heavy industrial use. Access to the site is by private street. The C & NW tracks run both east and west of the property. The site is flat in a Rockton sandy loam soil area. It is not subject to flooding.

g. Rock Island Railroad Property (vacant)

The property is owned by the Rock Island Railroad. Most of the land is vacant although some rail spurs, an old railroad service facility and some truck parking are located in the area. The total area of the site is approximately 85 acres in South St. Paul. The zoning is heavy industrial. The site also extends into Inver Grove Heights. Access is from Chestnut Street. Rock Island tracks run into the area and C & NW tracks run along the western edge of the property. There are no utilities. The topography is level and the soils are Rockton sandy loam. About half of this area is subject to occasional flooding.

h. Other Land Uses

As shown in figure 14, other land uses occur in an area of about 30 acres bounded on the east by the C & NW Railroad tracks and on the west by Concord Street. The land is used for a variety of concerns with about 50 percent occupied by Standard Building Products Company which primarily manufactures concrete blocks. Other uses are primarily automotive-oriented, with the exception of the southernmost parcel which is a mobile home court. Zoning is heavy industrial except for the mobile home court which is zoned as a mobile home park district. Access to the area is from Concord Street. The area is served by utilities. The site is level, with Rockton sandy soils. It is not subject to flooding.

2.57 Agricultural Land - No agricultural lands are located at the site. No potential prime and unique agricultural land is present at the site. (Source: U.S. Department of Agriculture.)

HISTORICAL AND ARCHAEOLOGICAL VALUES

2.58 In compliance with Section 106 of the National Historic Preservation Act of 1966 and Executive Order 11593, the National Register of Historic Places has been consulted and as of 6 September 1977 there are no listed sites in the proposed project area. The State Historic Preservation Officer (SHPO) has reviewed this project and has indicated that no known cultural resources will be affected (exhibit 2). The National Park Service, the State Archaeologist, and the SHPO were furnished copies of this draft environmental impact statement for their review. A record and literature search and archaeological survey of the Packer River Terminal Area was conducted in October 1975 by a professional archaeologist. No evidence of prehistoric or historic occupation was uncovered during this survey. The entire area is low and subject to periodic inundation by the Mississippi River, thus making it unsuitable for permanent habitation. The area may have been used for hunting and fishing activities, but the remains have since disappeared.

TRANSPORTATION

2.59 The Packer property is served by rail, water, and highway transportation systems. The property is directly served by the Chicago and Northwestern and the Chicago, Rock Island and Pacific (Rock Island) railroad lines. The site is also accessible by the Burlington Northern, Milwaukee Road, and Soo Line railroads.

2.60 The Chicago and Northwestern Railroad maintains a switching and classification yard approximately 3.5 miles north of the site. The Rock Island Railroad maintains and operates a similar facility immediately southwest of the site.

2.61 The site has direct access to the Mississippi River and the Upper Mississippi Waterway system. Tables 7 and 8 contain the barge commodity traffic data for the metropolitan area for 1972 to 1976. It should be noted that there is a substantial amount of intra-metropolitan traffic in coal. Thus, a shipment of coal from Minneapolis may be a receipt of coal in St. Paul or on the Minnesota River.

2.62 As can be seen in the tables, the primary cargoes brought into the metropolitan area are petroleum and petroleum products, coal, and sand and gravel. The primary products shipped are grain and coal.

2.63 The Minnesota River ports are the main shippers of grain while Minneapolis has become a shipper of coal. In the past, most of the coal used in the area was eastern coal brought up the river by barge. Now large amounts of western coal are brought into the Twin Cities by rail and shipped elsewhere by barge. Figure 15 shows the existing terminals in the metropolitan area.

2.64 The Packer property is served by three short streets that provide access to an arterial route (Concord Street) and eventually to Interstate 494 about 1/10 mile to the north. The average daily traffic (ADT) on Concord Street is approximately 14,000, with about 13 percent of the traffic commercial vehicles. The ADT on I-494 is approximately 32,000, with about 11 percent commercial vehicle traffic.

SOCIO-ECONOMIC ENVIRONMENT

2.65 South St. Paul is one of the many urban entities that make up the Minneapolis-St. Paul metropolitan area. South St. Paul is approximately 1.3 miles wide and 4 miles long and is situated on the west bank of the Mississippi River from river mile 831.1 to river mile 835.9.

2.66 South St. Paul is bounded on the north by St. Paul, on the west by West St. Paul, on the south by Inver Grove Heights, and on the east by the Mississippi River and Newport.

Table 7
Metropolitan Area Barge Traffic Shipments (1972-76) (1000 Short Tons)

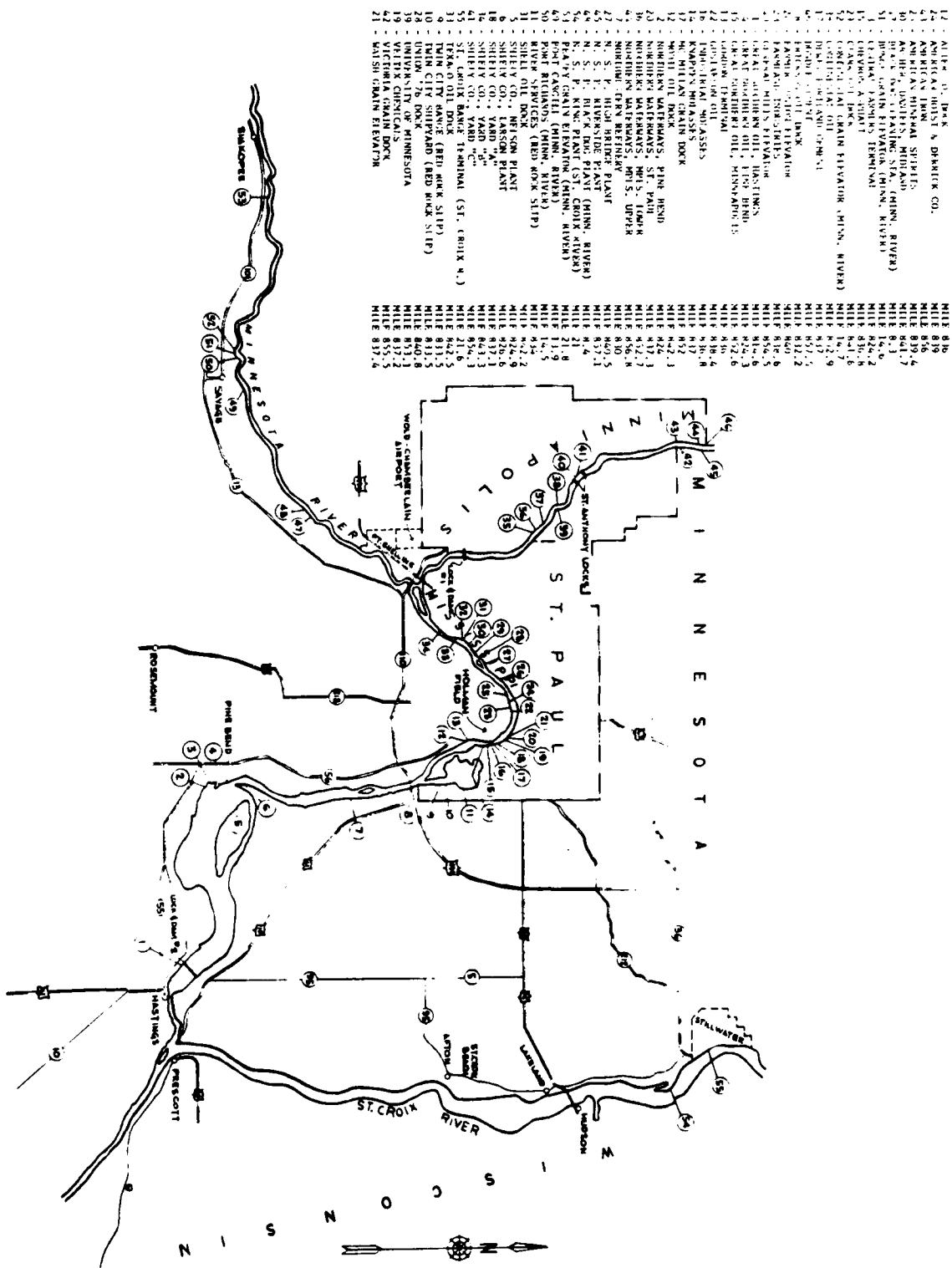
Product port/year	Grain	Misc. Food Prod.	Fertilizer	Coal	Coke	Non-Metallic Minerals	Bldg. Products	Iron- Steel	Scrap	Paper Prod.	Sand & Gravel	Petroleum & All Products	Other	Total
Minneapolis														
1972	403	45	25	253	0	0	0	1	37	0	0	0	1	765
1973	411	39	0	556	3	0	0	0	26	0	1	6	1	1043
1974	370	26	1	1304	0	0	3	0	3	0	0	0	0	1707
1975	469	110	0	1935	0	0	3	4	1	0	0	0	2	2524
*1976	550	NA	NA	1700	NA	NA	NA	NA	NA	NA	NA	10	NA	2330
St. Paul														
1972	1255	111	0	63	119	0	0	13	18	0	0	26	22	1627
1973	1678	38	0	87	42	0	0	8	16	0	0	17	8	1892
1974	2151	94	0	110	54	0	0	2	8	0	0	37	2	2458
1975	1548	157	10	373	63	0	0	1	6	0	0	14	25	2197
*1976	1715	NA	NA	900	NA	NA	NA	NA	NA	NA	NA	460	NA	2600
Minnesota R.														
1972	3176	56	0	0	0	0	0	0	0	0	0	0	0	3232
1973	3334	54	1	0	0	0	0	0	0	0	0	0	0	3589
1974	3536	100	0	6	0	0	0	2	0	0	0	0	0	3644
1975	2334	78	0	49	0	0	0	3	3	0	0	0	8	2475
*1976	3125	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0	NA	3200
Total														
1972	4834	212	25	316	119	0	0	14	55	0	0	26	23	5624
1973	5423	131	1	643	45	0	0	8	42	0	1	23	9	6324
1974	6057	220	1	1420	54	0	3	4	11	0	0	37	2	7809
1975	4351	345	10	2357	63	0	3	8	10	0	0	14	35	7196
*1976	5380	NA	NA	2600	NA	NA	NA	NA	NA	NA	NA	470	NA	8530

* - Estimates
NA - Not Available
Non-metallic minerals is primarily road salt

Table 8
Metropolitan Area Barge Traffic Receipts (1972-1976) (1000 Short Tons)

Product part/year	Grain	Misc. Food Prod.	Fertilizer	Coal	Coke	Non-Metallic Minerals	Bldg. Products	Iron- Steel	Scrap	Paper Prod.	Sand & Gravel	Petroleum & All Products	Other	Total
Minneapolis														
1972	0	0	4	156	0	59	74	60	0	12	461	69	21	942
1973	0	0	4	103	0	94	59	55	0	9	434	44	5	517
1974	3	0	9	7	0	114	102	27	0	6	510	46	7	622
1975	1	0	6	28	0	141	95	23	0	9	268	57	25	653
*1976	10	NA	NA	50	NA	NA	NA	NA	NA	NA	NA	130	NA	730
St. Paul														
1972	0	60	52	444	0	104	26	22	2	0	1159	1376	185	3459
1973	0	55	61	307	0	70	6	43	3	0	1248	1310	85	2136
1974	2	68	29	257	1	38	23	42	13	0	1048	1056	109	2636
1975	3	45	17	249	0	75	0	45	2	0	916	1246	128	2735
*1976	100	NA	NA	500	NA	NA	NA	NA	NA	NA	NA	1550	NA	3040
Minnesota R.														
1972	0	35	115	724	0	136	0	27	0	0	0	10	29	1076
1973	0	27	100	639	0	70	0	21	0	0	0	14	24	895
1974	5	32	133	757	0	117	0	26	0	0	0	17	46	1133
1975	3	28	125	906	0	207	0	32	0	0	0	16	48	1365
*1976	0	NA	NA	900	NA	NA	NA	NA	NA	NA	NA	20	NA	1560
Total														
1972	0	95	171	1324	0	299	100	109	2	12	1620	1455	225	5412
1973	0	82	165	1049	0	234	65	119	3	9	1682	1368	114	4890
1974	10	100	171	1021	1	269	125	95	13	6	1558	1113	159	4641
1975	7	73	148	1183	0	423	95	100	2	9	1184	1319	201	4744
*1976	110	NA	NA	1450	NA	NA	NA	NA	NA	NA	NA	1700	NA	5630

* - Estimates
NA - Not Available
Non-metallic minerals is primarily road salt



Barge Terminals in the Metropolitan Area

Figure 15

2.67 South St. Paul has a population of about 25,000. The industrial area of the city is concentrated along the Mississippi River. There has been an economic decline in South St. Paul over the last several years, primarily due to the decline of the meat packing industry. In 1969 the city was designated an "Economically Depressed Area" by the Economic Development Administration.

2.68 Table 9 reflects the gains and losses in employment over the last seven years. The unemployment figures for South St. Paul are included in statistics kept for the metropolitan area. In February 1977, unemployment in the metropolitan area was at 6.3 percent compared to 6.5 percent for the State of Minnesota and 8.5 percent nationally.

2.69 There are no public facilities such as schools, churches, hospitals, parks, etc., in the vicinity of the Packer property. The city of South St. Paul has proposed acquiring property adjacent to the south boundary of the Packer site for a riverfront park.

Utilities and Public Services

2.70 The city of South St. Paul is a mature metropolitan community, providing the full range of municipal services essential to urban economic development. The existing terminal facility, constructed in 1966, is served by municipal water and sanitary sewer systems. Existing and proposed development of the terminal is in design conformance with capacities of these systems. Solid waste disposal in the city is operated through a system of licensed haulers. The terminal is currently served by one of these haulers, with ultimate disposal at the Pine Bend landfill, approximately 10 miles to the south. Natural gas, telephone, and electric service are currently available to the terminal facility.

3.0 RELATIONSHIP OF THE PROPOSED PROJECT TO LAND USE PLANS

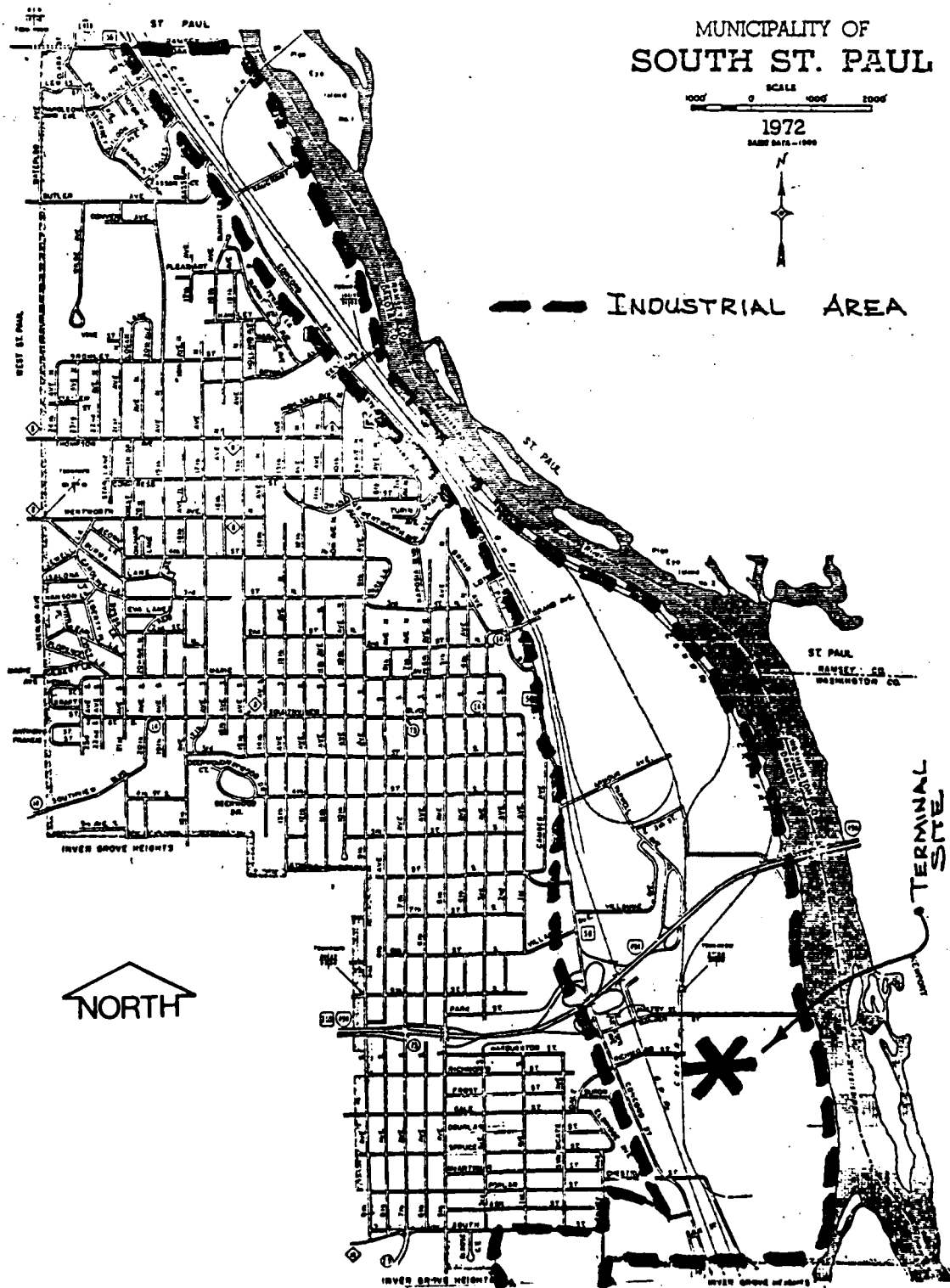
3.1 The Packer property is in an area zoned for heavy industry by the city of South St. Paul (figure 16). A floodway line established by the Minnesota DNR crosses the property (figure 3). No filling is allowed riverward of this line. Thus, for all practical purposes the land cannot be developed. This is the portion of their property that Packer proposes to donate to the city.

3.2 Under the Critical Areas Program for the Mississippi River corridor in the metropolitan area, the Packer property is in an "Urban Diversified District." The Packer facility is in compliance with the guidelines established for Urban Diversified Districts. The proposed project does not conflict with any State or local land use plans.

Table 9
EMPLOYMENT LOSSES/GAINS
1969 THROUGH 1976
SOUTH ST. PAUL, MINNESOTA

<u>Losses</u> *	<u>Reasons</u>	<u>Loss or Gain</u>	<u>Totals</u>
Swift and Company	- Closed Plant	2,650	
Armour and Company	- Reduced Opers.	1,355	
Southview Chevrolet	- Relocated	123	
American Lumber Company	- Closed Plant	100	
Metro Meats Company	- Closed Plant	220	
Kostka Electric	- Bankruptcy	14	
Town and Country GMC	- Bankruptcy	45	
Inland Paper	- Unknown	<u>28</u>	
			4,535
<u>Gains</u> *			
Farwell, Ozmun, Kirk	(Hardware)	350	
Miller Manufacturing	(Plastics)	14	
Thru-Blu Inc.	(Tanning)	46	
T.C. Hide & Fur	(Tanning)	50	
Fearing Manufacturing	(Plastics)	30	
Waterous Company	(Pumps, Hydrants)	<u>300</u>	
			<u>790</u>
Approximate Net Loss:			3,745

* Source: City of South St. Paul, Department of Economic Development



Industrial Area - South St. Paul

Figure 16

3.3 The wetlands on the Packer property come under Federal regulatory jurisdiction via Section 404 of P.L. 92-500. Section 404 reads as follows:

PERMITS FOR DREDGED FILL MATERIAL

SEC. 404. (a) The Secretary of the Army, acting through the Chief of Engineers, may issue permits, after notice and opportunity for public hearings for the discharge of dredged or fill material into the navigable waters at specified disposal sites.

(b) Subject to subsection (c) of this section, each such disposal site shall be specified for each such permit by the Secretary of the Army (1) through the application of guidelines developed by the Administrator, in conjunction with the Secretary of the Army, which guidelines shall be based upon criteria comparable to the criteria applicable to the territorial seas, the contiguous zone, and the ocean under section 403(c), and (2) in any case where such guidelines under clause (1) alone would prohibit the specification of a site, through the application additionally of the economic impact of the site on navigation and anchorage.

(c) The Administrator is authorized to prohibit the specification (including the withdrawal of specification) of any defined area as a disposal site, and he is authorized to deny or restrict the use of any defined area for specification (including the withdrawal of specification) as a disposal site, whenever he determines, after notice and opportunity for public hearings, that the discharges of such materials into such area will have an unacceptable adverse effect on municipal water supplies, shellfish beds and fishery areas (including spawning and breeding areas), wildlife, or recreational areas. Before making such determination, the Administrator shall consult with the Secretary of the Army. The Administrator shall set forth in writing and make public his findings and his reasons for making any determination under this subsection.

3.4 Both the Corps and EPA have wetlands policies. The Corps wetlands policy is contained in 33 C.F.R. 320.4 (b) (19 July 1977 Federal Register). The wetlands policy is essentially contained in the following two paragraphs:.

320.4(b)(1) Wetlands are vital areas that constitute a productive and valuable public resource, the unnecessary alteration of which should be discouraged as contrary to the public interest.

320.4(b)(4) No permit shall be granted to work in wetlands identified as important by subparagraph [320.4(b)] (2) above, unless the District Engineer concluded, on the basis of the analysis required in paragraph [320.4] (a) above, that the benefits of the project outweigh the damage to the wetlands resource and the proposed alteration is necessary to realize those benefits. In evaluating whether a particular alteration is necessary, the District Engineer shall consider whether the proposed activity

is primarily dependent on being located in, or in close proximity to, the aquatic environment and whether feasible alternative sites are available.

This is the policy the Corps must apply as part of the public interest review of the Packer proposal.

3.5 The EPA wetlands policy is contained in 38 C.F.R. 10834 (2 May 1973 Federal Register). The EPA considers the proposed project to be in direct conflict with their wetlands policy (exhibit 3).

4.0 ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION

4.1 The proposed fill action is an activity independent of the construction and operation of the terminal as authorized by the Section 10 permit. Packer has informed the Corps that the facility as defined by the limits of the Section 10 permit is a viable economic entity in itself. The impacts, as presented in this section, are those associated with the filling of about 22 acres of wetlands in order to expand the terminal operation.

SOCIAL EFFECTS

Noise Levels

4.2 There would be an increase in the ambient noise levels associated with both the construction and operation phases of the project. During the construction phase, the primary source of noise would be from operation of heavy equipment such as bulldozers and trucks.

4.3 Once the additional land became usable, there would be an increase in activity at the terminal as greater volumes of material were handled. Increases in noise levels would be most directly associated with increased barge, rail and truck traffic to the site. As the terminal has not yet gone into operation there are no background noise level data available which could be used to accurately project the level of increase associated with increased traffic and material handling. Because of the industrial nature of the area, the additional noise resulting from the proposed expansion should not have any significant effect. The closest known sensitive receptor is a nursing home approximately 1.4 miles from the site.

Aesthetic Values

4.4 The proposed project would turn 22 acres of wetlands into an industrial storage area and water detention basin. The impact this would have on local aesthetic values would differ with individual perspectives. The fill would be occasionally visible from the Mississippi River. However, this portion of the river receives little recreational usage so the impact upon river users would be negligible.

Historical/Archaeological Values

4.5 The literature and record search did not identify any known cultural resources in the project area. Furthermore, the archaeological survey did not locate any prehistoric or historic resources. Therefore, it is our determination that the project will have no impact on cultural resources.

Recreational Values

4.6 As the area to be filled receives little or no direct recreational usage, the impact on recreation would be negligible. The proposed fill would remove the final buffer between the terminal and the open space land riverward of the fill area. If the open space land were ever developed for recreational use, the loss of the buffer area might have an impact on the recreational value of this tract.

Public Health

4.7 The proposed project would have no significant effect upon public health. The anticipated air emissions (see air quality impacts) could be considered a minor adverse impact on public health.

4.8 The filling of the wetlands would eliminate the mosquito-producing capabilities of that particular wetland tract. Mosquitos are known carriers of diseases, especially encephalitis. When considering the mosquito-producing capabilities of the remaining wetlands in the area, it is doubtful whether any public health benefit would be derived from filling this particular 22 acres.

Transportation

4.9 The impact of the project upon transportation would be to increase the use of different types of transportation serving the terminal.

4.10 Barge Traffic: Because of the complexities of barge traffic patterns in the metropolitan area it is difficult to accurately assess the impact of the Packer operations on barge traffic. Packer's operation will stimulate new traffic and may redistribute traffic by luring business away from existing terminals.

4.11 To assess the impact of the additional traffic stimulated by the expansion of the terminal, a number of assumptions were made. They are as follows:

1. The tonnage estimates for the existing and proposed developments are accurate.

2. Coal, grain, and scrap would be received in the terminal by land modes of transportation and shipped downriver by barge.

3. Fertilizers, salt, building products, petroleum products, sand and aggregates, and all other commodities would be brought upriver by barge and shipped out of the Packer terminal by rail or truck.

4. Lock and Dam No. 2 is considered the entry and exit point for the metropolitan area. Lockage data for 1976 are used as baseline data.

4.12 Tables 10 and 11 below indicate the two probable extremes that could occur as impacts upon barge traffic. Table 10 assumes that the only additional barge traffic stimulated by the Packer facility would be that necessary to haul the coal, petroleum, petroleum products and "other" commodities. In this approach it is assumed that Packer would not stimulate new shipments of grain, salt, etc., but instead would lure business away from existing terminals in the metropolitan area. Trends over the past 6 years indicate that coal and petroleum product shipments and receipts have risen while the other listed commodities have stayed at relatively the same level.

Table 10

	L/D #2 1976	Present Project		Proposed Expansion		
	# Barges	#Barges	% Increase	# Barges	% Increase a b	
Upstream	5,781	150	2.6	257	7.0	3.7
Downstream	5,983	667	11.1	0	11.1	0.0
Total	11,764	717	6.1	257	8.3	2.1

(a) Increase of total facility over 1976

(b) Increase of proposed expansion over (1976 + existing develop.)

Table 11

	L/D #2 1976	Present Project		Proposed Expansion		
	# Barges	# Barges	% Increase	# Barges	% Increase a b	
Upstream	5,781	333	5.8	33	6.3	0.5
Downstream	5,983	1367	22.8	390	29.4	5.3
Total	11,764	1700	14.5	423	18.0	3.1

(a) Increase of total facility over 1976

(b) Increase of proposed expansion over (1976 + existing develop.)

4.13 Table 11 considers the worst-case situation relative to barge traffic. In this instance, all commodities handled by the Packer terminal were assumed to represent "new" business to the metropolitan area.

4.14 As can be seen, it is expected that the expansion of the terminal will increase barge traffic 2 to 3 percent over and above 1976 traffic and traffic projected for the existing terminal.

4.15 Rail Traffic: No comparison data are available, but the railroads have indicated to the applicant that their capacity exceeds the projected requirements of the terminal.

4.16 Truck Traffic: Packer projects a peak month Average Daily Traffic (ADT) of 167 trucks for the existing project and an additional peak ADT of 67 trucks for the proposed expansion. The average annual ADT projections are 99 and 53, respectively. Current commercial traffic on Concord Street is about 2,320 vehicles while the figure for I-494 is 3,520.

4.17 The proposed expansion would increase commercial vehicle traffic on Concord Street 2.7 percent during peak months, once the existing terminal goes into operation. The corresponding figure for I-494 is a 1.8-percent increase.

4.18 The terminal would be designed with sufficient service area so that truck traffic would not back up into access streets or across railroads.

Community Cohesion and Growth

4.19 It is not anticipated that the proposal would have any impact upon community cohesion. The project is consistent with local zoning regulations and has not stimulated any local controversy. There should be no disruption of any existing social patterns from the project.

4.20 The effect upon community growth is expected to be almost entirely economic (see paragraphs 4.022-4.024). It is anticipated that the jobs would be filled by residents of the Twin Cities metropolitan area and would not cause an influx of people into South St. Paul or neighboring municipalities.

Population Displacement

4.21 No individuals or residences would be displaced by the proposed fill.

Economic Effects

4.22 Packer projects that the proposed expansion would allow the terminal facility to employ 40 people during the construction phase with an annual payroll of \$720,000. It is estimated that the construction phase would last about 1 year.

4.23 Once in operation, the additional development is projected by Packer to employ about 35 people with an annual payroll of \$507,500. It is estimated that an additional 15 jobs would be stimulated in related industries with an annual payroll of \$225,000.

These figures have been reviewed by Corps economists and it is felt that these projections reflect peak conditions with ultimate development of all available land. Projected annual property taxes from the 22-acre tract are:

a. Planned Improvements - \$ 48,000

b. Potential Improvements - \$144,000

4.24 The primary purpose of the proposed expansion is to provide increased stability to the terminal project as a whole. The operation of a multi-commodity barge terminal is a high-risk venture with a cyclic nature. The additional property that would be available via the proposed fill activity would aid Packer in withstanding the cyclic demand for goods and shipments.

NATURAL RESOURCES EFFECTS

Air Quality

4.25 The proposed expansion has the potential of affecting air quality during: (1) construction, and (2) operation.

4.26 Particulate Emissions: During the construction period air quality would be affected as a result of fugitive dust or particulate emissions from soil exposed to wind and construction traffic. During the site preparation and construction, the major sources of fugitive dust would be: (1) wind erosion of cleared land, (2) transfer and transport of earth during construction, and (3) vehicular activity on unpaved roads. Dust emissions would vary substantially from day to day, depending upon the level of activity, the specific operations and the prevailing weather. The quantity of dust emissions from construction activities is proportional to the area of land being worked and the level of construction operations. Fugitive dust emissions from the construction vehicles for a project this size (22 acres) should not be significant.

4.27 Particulate emissions that may result from the operation phase are dependent upon the type and amount of material stored and transferred, transfer and storage methods used, and the control measures employed. Commodities that present potential sources of particulate emissions and would be attributed to the additional land development include sand/aggregates (100,000 tons/year) and salt (50,000 tons/year). Potential dust emissions in pounds per ton of commodity stored are summarized in table 12. For comparison, the potential particulate emissions for the Section 10 permit facility are also shown in table 12. The uncontrolled emission estimate for the proposed expansion is 280 pounds of particulates per day, while controlled emissions would be 58 pounds per day. Control methods would include chemical treatment of the material loaded onto piles, coupled with watering or treatment of facility roadways.

4.28 An emission offset would be gained through the paving of about 1,400 feet of currently unpaved roads leading to the proposed facility. Particulate emissions attributable to 53 additional Section 404

development trucks per day on the unpaved roads would be 445 pounds per day. Paving would result in 85 percent control of these emissions to 67 pounds per day.

Table 12 - Potential Particulate Emissions (lb/day)

Commodity	Emission Factor ⁽¹⁾ (lb/ton)	Existing Facility		Proposed Facility	
		No Control	Controlled	No Control	Controlled
Grains, Grain Products	1.5	4,100	1,025	0	0
Fertilizers	Unknown ⁽²⁾	820	410	0	0
Coal	1.0	2,740	275	0	0
Sand/ Aggregates	0.28	0	0	80	8
Salt	Unknown ⁽²⁾	200	50	200	50
Total Emissions		7,860	1,760	280	58

(1) Compilation of Air Pollution Emissions Factors: AP-42.

(2) No emission factor is reported. Emissions are assumed to be 1.5 lb/ton.

(3) Control efficiencies assumed are: Grain 75%, Fertilizers 50%, Coal 90%, Sand/Aggregates 90%, and Salt 75%.

4.29 The proposed project is located in an area that is non-attainment for particulates. Therefore, the project may come under EPA's Trade-Off Policy that is administered by the MPCA. Thus, when Packer applies for a MPCA permit, approval, or license for such things as coal- or grain-handling equipment, they would have to modify their operation to show a reduction in particulate emissions from some phase of the existing operation to compensate for the increase in particulates that would result if the new facility were permitted.

4.30 Photochemical Oxidants: Evaporation losses from the storage and transportation of any petroleum product represents a potential emission source. The Minneapolis/St. Paul Air Quality Control Region has experienced difficulty in meeting the photochemical oxidant standards. Hydrocarbon emissions from storage can be substantially reduced by using new storage tanks with a floating roof design.

4.31 Carbon Monoxide: The increased truck, train and barge traffic generated by the additional land development would have minimal effect on the carbon monoxide levels in the vicinity of the project. It is estimated that 53 trucks per day could be attributed to the 404 land development. When broken down into peak 1-hour and 8-hour

averaging times, these sources are insignificant when compared with the average daily traffic on the roadways adjacent to the proposed facility. In addition, there are no sensitive receptors located in the vicinity of the proposed facility.

Water Quality

4.32 Water pollution-related aspects of the proposed development include: (1) a potential increase in non-point source pollutants, (2) contaminated storage pile runoff, and (3) accidental spillage during handling and transfer of bulk commodities.

4.33 Water Pollution Potential: Street surfaces within industrial areas have been observed to accumulate potential water quality contaminants at a faster rate than either commercial or residential areas. Data supporting this general conclusion have, however, been highly variable with respect to specific contaminants and occasionally for a broad spectrum of contaminants.

4.34 Table 13 presents a partial list of annual loading values obtained for areas across the United States. Loadings obtained in any given area are a function of numerous factors, including:

1. Surrounding land uses.
2. Local geology and soils.
3. Elapsed time since last cleaning or flushing.
4. Local traffic volume and character.
5. Public works practices.
6. Street surface type and condition.
7. Season and general climate.
8. Degree of atmospheric fallout.

The above factors are thought to interact in complex ways in producing runoff quantity/quality patterns reported in the literature.

4.35 The proposed development of 22 acres of land would be expected to result in an increased accumulation of some non-point source contaminants. It is expected that these increases would result primarily from:

1. Increased truck traffic (53 vehicles per day).
2. Impervious asphalt surfacing.
3. Erosion occurring during construction.

A second source of water pollution could potentially be contamination of storage pile runoff. The proposed action would result in an increase in bulk commodities handling, storage and transfer over and above that which will occur as a result of the Section 10 development. This projected increase is approximately 635,000 tons per year. In terms of contamination of storage pile runoff, a worst-case impact potential would occur, if all of the 635,000 tons were to consist of dry materials stored in unenclosed areas. Sand/aggregate and road salt are two commodities which would be stockpiled in the 404 area in the above manner. Of these two commodities, road salt is potentially the most damaging to the environment if storage is uncontrolled. It is known to kill or seriously damage vegetation and to interfere with oxygenation of receiving waters. Sand/aggregate stockpiles could be relatively innocuous, depending upon the size range of the materials and their source.

TABLE 13

ANNUAL LOADINGS FROM URBAN LAND REPORTED IN THE LITERATURE

Source	Land Use	Oxygen Demand		Phosphorus	Solids		Metals			
		BOD ₅	COD		Total	Suspended	Pb	Zn	Cu	Cr
Weibel (1963) Cincinnati, Ohio lb/ac/yr	27 acres reg. and light comm.	33	240	.8		730				
Cleveland (1970) Tulsa, Oklahoma lbs/ac/yr	32% residential 8% comm. & industrial 21% agriculture 25% open & unused 14% streets	30	202	2.5	2855					
	Mean					470-5100				
	Range	12-48	60-470	.4 - 2.6						
Bryan (1972) Durham, N.C. lbs/ac/yr	60% residential 20% comm. & industrial 20% public	84	1040	1.1	15,900		1.9			
Pitt & Amy (1973) 100.5 - Cities (Atomic absorption) lbs/curb mile/yr.	residential industrial commercial				895 2384 281		1.3 3.2 1.1	.4 .7 .1	.1 .3 --	.2 .5 .1
Sartor & Boyd (1972) lbs/curb mile/yr	average of 10 communities.	14	95	.4	1400		.6	.6	.2	.1
Metropolitan Council (1973) Mpls.-St. Paul Metro Area lbs/ac/yr	commercial residential (dense) residential (ave.) residential (thin) open space		720 253 264 81 65	1.3 3.5 1.4 .4 .3		460 811 481 139 54				
Wells (1973) Lubbock, Texas lbs/ac/yr	223 ac. residential		83		390	240				
Raw Sewage lb/ac/yr	6 people per acre	370	440	18		440				
Secondary Sewage lbs/ac/yr	6 people per acre	45				50				

4.36 Without mitigation, a runoff-producing precipitation event falling upon a salt stockpile could result in the introduction of significant quantities of chloride and other elements in dissolved form into the backwater area and the Mississippi River.

A third source of water pollution could occur if there were an accidental spill of material during the transfer of some commodity. Rupture of tanks and pipelines, and the collision of barge vessels, are possible although unlikely occurrences. Although the probability of a major spill event is low, damage to the environment can be very significant without mitigative measures, if such an event should occur. The potential for water pollution is likely to be greatest in the case of commodities which are shipped, transferred and stored in liquid form. Petroleum products, if spilled into the Mississippi, would be most damaging to the environment. Direct mortality of wildlife would occur, as well as loss of habitat and recreation areas. It is for these reasons that transportation-related and non-transportation-related terminal and oil storage facilities are regulated by Federal and State law.

Mitigation Measures for Water Quality

4.37 Mitigative measures would be incorporated into the design, construction and operation of the proposed development. These are responsive to the three categories of water pollution potential identified and discussed in this section of the report. The implementation of mitigative measures is also responsive to the applicable regulations to the extent that potential users and tenants of the terminal can be anticipated at this time. Use of the facilities for other commodities can be examined on a case-by-case basis.

4.38 Drainage Routing: As shown previously in figure 12, drainage from Sub-areas D and G presently flows overland to the existing barge slip. Sub-areas D and G represent approximately 20 acres of industrial land being developed under Section 10 of the Rivers and Harbors Act. This drainage does not pass through the existing marsh and, therefore, potential pollutant loads are not attenuated to any great extent before reaching the Mississippi River.

4.39 Under the proposed action, drainage from these sub-areas would be collected and routed to an existing storm sewer system. Any potential pollutant particles would then be subject to the physical process of sedimentation, as discussed in relation to the proposed retention basin. This aspect of the proposed action is expected to result in a positive impact to water quality.

4.40 Stormwater Storage and Release: The proposed action would result in the availability of about 7.6 acres (out of the 22 acres of 404 land) for use as a retention basin. While detailed design has not been completed at this time, a number of design standards would be achieved. The criteria set forth by the Soil Conservation Service, U.S. Department of Agriculture, would be met or exceeded.

These criteria specify a design storm having a frequency of once in 25 years. Other criteria observed are related to dike construction, surface protection, safety, capacity, and maintenance. The outlet velocity would be limited to 6 feet per second and riprap would be incorporated at all control points to minimize erosion potential. A design depth would be selected to insure the maximum quantity of standing water over the retention basin area. At minimum, the bottom elevation of the pond would be at 685.2 m.s.l., pursuant to permit conditions established by the DNR. If this design depth were selected, available soils information indicates that at least 4 to 5 feet of soil would still cover the underlying bedrock limestone. This layer should serve as adequate protection against the entry of contaminated recharge into the groundwater during periods of water table recession.

4.41 Preliminary calculations have been made based upon the runoff coefficients, previously given in table 4 and rainfall intensity/duration curves developed from the U.S. Weather Bureau, "Technical Paper No. 40." With a surface area of 7.6 acres and a potential depth of at least 9 feet, the retention basin can be assigned a low release rate and still have the necessary capacity to detain in excess of the 25-year design storm. In actuality, the release rates can be controlled to achieve greater detention times and smaller discharge than would occur in the existing marsh during comparable runoff events.

4.42 With a surface water area maintained at 7.6 acres (twice the existing marsh pool) and a controlled release rate, the proposed retention pond would provide a greater degree of sedimentation than the marsh presently provides. The percentage increase in collection efficiency for any given event up to the design storm is estimated to be on the order of 5 to 10 percent. Total loadings to the backwater on an annual basis would be reduced by a comparable amount.

4.43 Runoff Diversion: Diversion berms and/or ditches would be constructed to divert or exclude excess runoff from all storage piles. This measure would be incorporated with respect to any dry materials stored in uninclosed areas. A requirement for similar measures will be made a part of all contracts with future users or tenants who may stockpile dry materials.

4.44 Coverage of Storage Piles: Storage piles would be covered at all times when materials are not being added or withdrawn. Tarpaulins or other covers would be securely anchored. Such a measure would be prescribed in, and made a part of, future contracts with tenants or users.

4.45 Special Measures for Salt Storage: Depending upon the magnitude of problems experienced and the economics of possible solutions, measures other than those discussed before may be implemented to mitigate the impact of salt storage. Measures listed below range from relatively simple, inexpensive improvements in "housekeeping" practices to the most expensive alternative of full inclosure. All measures listed would not be necessary and the exact mix would be determined by the necessity for action and the costs involved. Several measures are identified which would already be incorporated during the course of planning and engineering for this project.

4.46 Salt storage facilities ranging from high to low cost are:

1. Permanent structure with doors.
2. Permanent structure with open face positioned away from prevailing winds.
3. Three-sided concrete or wood bunker with permanent or temporary cover.
4. Canvas, vinyl, polyethylene, or plastic laminated inclosures.

In all of these facilities, a structurally adequate, waterproof base pad is considered necessary. The asphalt pad proposed with development of the 404 lands would be large enough to contain all salt, including scatter that might occur during loading and unloading operations. It would also be strong enough to support the weight of any salt or salt handling equipment that might be used.

4.47 From the operations standpoint, an additional range of mitigating measures is readily achievable:

1. Experience indicates that conical piles should be avoided because they are difficult to cover. Instead, windrow storage would be used.
2. Seasonal limitations can be placed on salt stockpiling. Salt stockpiling could be delayed until after the ground is frozen in the fall and removed before the spring thaw.
3. When salt is removed from covered storage, it would be taken from only one end so that exposure of the pile to the weather is minimized. At the end of each day, routine maintenance of the pile could include sweeping the work area clean of sand, pushing all scattered salt to the middle of the work face as the pile is reshaped, and, finally, covering the pile completely until its next period of use.
4. Finally, if circumstances and cost considerations warrant it, a leak-proof brine-holding vault may be incorporated into the drainage system design.

4.48 Spillage Control Counter-Measures and Contingency Plans:

All applicable State and Federal regulations to prevent discharges of oil into the Mississippi River, and to contain such discharges if they occur, will be observed. Measures under design at the present time include a flood-prevention dike, and retention basin (including overflow controls, baffles, sumps, and other appurtenances, as may be necessary), and towable containment devices (for use in the event of spill within the existing barge slip).

4.49 Contingency plans in the event of accidental spill are being prepared and would be available at the time of application for all necessary permits to handle such materials. Based upon the above considerations in mitigation of the proposed action, it is likely that any impact of a potential oil spill would be very minor.

Wetlands

4.50 Approximately 22 acres of wetlands would be filled and permanently lost. The value of the wetlands as nesting, rearing and general habitat for wildlife would be lost. The vegetation as described in paragraphs 2.30 to 2.38 page 32 would be cleared prior to filling. Though no definite plans have been made, in all likelihood the material would be disposed of in a landfill.

4.51 The area filled includes about 2.7 acres of highly productive waterfowl marsh, 11.1 acres of "edge" habitat that supports a variety of species, and 8.0 acres of mature floodplain forest.

4.52 During construction, mobile species of wildlife would migrate to adjacent habitat. As this habitat is probably at or near carrying capacity, the displaced wildlife would suffer losses to predation, starvation, stress, and winterkill. The temporary excess population would have an adverse impact upon the adjacent habitat. Small mammals such as mice, voles, gophers, etc., would probably be covered by the fill.

4.53 The food chain production value of the area filled would be lost. This would have a particularly adverse impact upon the habitat value of the 28-acre dedication parcel. Most of the parcel is mature floodplain forest and as such does not have a variety of microhabitats and is low in food production. Most of the wildlife in that area undoubtedly use the marsh and edge habitat that would be filled as a food source. Access to the remaining wetland area to larger mammals would be further reduced.

4.54 There would be a loss of habitat diversity on the Packer site that would significantly reduce its value for wildlife. At present, the approximately 50 acres of wetlands on the Packer property consist of six distinct habitat types, covering 1.3, 2.7, 3.5, 6.3, 6.5, and 30 acres, respectively. After filling, there would be approximately 28 acres left, consisting of two habitat types of 6 and 22 acres in size.

4.55 In the remaining undeveloped area, the noise and human activity associated with developing the wetland portion would disturb more reclusive species such as forest songbirds. The impacts are unquantifiable.

4.56 A potential northern pike spawning ground would be lost. It is believed that the area is not used successfully for spawning at the present time. However, in the future, improved water quality in Pool 2 of the Mississippi River and removal of an obstructing road would make this a more valuable spawning site.

4.57 The value of the wetlands as a filter of urban runoff water would be lost. The loss of this capability would be offset by the proposed detention basin as discussed in the section on water quality impacts.

4.58 The use of the wetlands as a flood storage area would be lost. This would be of minor impact as storage loss would be approximately 290 acre-feet of storage for the 100-year flood.

4.59 The wetlands involved are groundwater discharge wetlands. With the proposed fill, the groundwater discharge occurring in the wetland would take place either in the sloughs riverward of the fill area or in the river itself.

5.0 UNAVOIDABLE ADVERSE IMPACTS OF THE PROPOSED ACTION

5.1 There would be a minor increase in ambient noise levels during both the construction and operation phases of the project.

5.2 The loss of buffer area would reduce the potential recreational value of the 28-acre dedication parcel.

5.3 There would be a 2- to 3-percent increase in barge traffic in the metropolitan area. There also would be a minor increase in truck traffic, primarily on Concord Street and I-494.

5.4 There would be minor air quality degradation associated with the construction and operation of the project. The emissions would primarily be particulates, hydrocarbons, and carbon monoxide.

5.5 Approximately 22 acres of wetlands would be filled and permanently lost. The ability of the wetlands to perform the following functions would be lost:

- a. nesting habitat
- b. rearing habitat
- c. general habitat
- d. food chain production
- e. water quality function
- f. flood water storage

5.6 The wildlife habitat value of an adjoining 28 acres of flood-plain forest would be significantly reduced from the loss of habitat diversity on the site and the loss of buffer area.

6.0 ALTERNATIVES TO THE PROPOSED ACTION

NO ACTION

6.1 The no action alternative would involve denial of the permit application. The impacts as discussed in section 4 of this document would not take place.

6.2 The 22 acres of wetlands would remain intact and would continue to serve their present functions. The economic benefits projected from the expansion would not accrue. The present terminal project would be more susceptible to economic fluctuations. Denial of the permit application would not preclude Packer from pursuit of other alternatives discussed in this section. However, it may cause Packer to develop the Section 10 facility in such a manner that would make it more difficult to expand in the future, i.e., location of storage facilities and handling equipment may not be suited to expansion.

6.3 If Packer does not expand because of denial of the application, the commodities Packer estimate they would handle would be processed elsewhere in the metropolitan transportation network. Other existing barge terminals may handle the commodities or the goods may be transported by rail or truck.

PARTIAL EXPANSION INTO THE WETLANDS

6.4 Figure 17 depicts partial expansion into the wetlands. This proposal would allow Packer to fill approximately 4 acres of wetlands. This alternative would provide Packer with approximately 24 percent of the storage area they would have under the proposed plan. However, because of the spatial location of the 4 acres, the usefulness of the area to Packer would be limited.

6.5 With this alternative the remaining 18 acres of wetland would continue to serve their natural functions. A buffer area would be left between the terminal and the marsh and sloughs so as to maintain attractiveness to wildlife.

DEFERMENT OF DEVELOPMENT

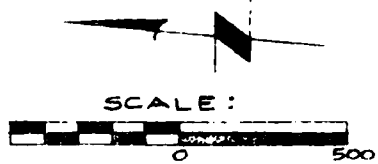
6.6 This alternative would have Packer defer the expansion proposal for a number of years.

The advantages are:

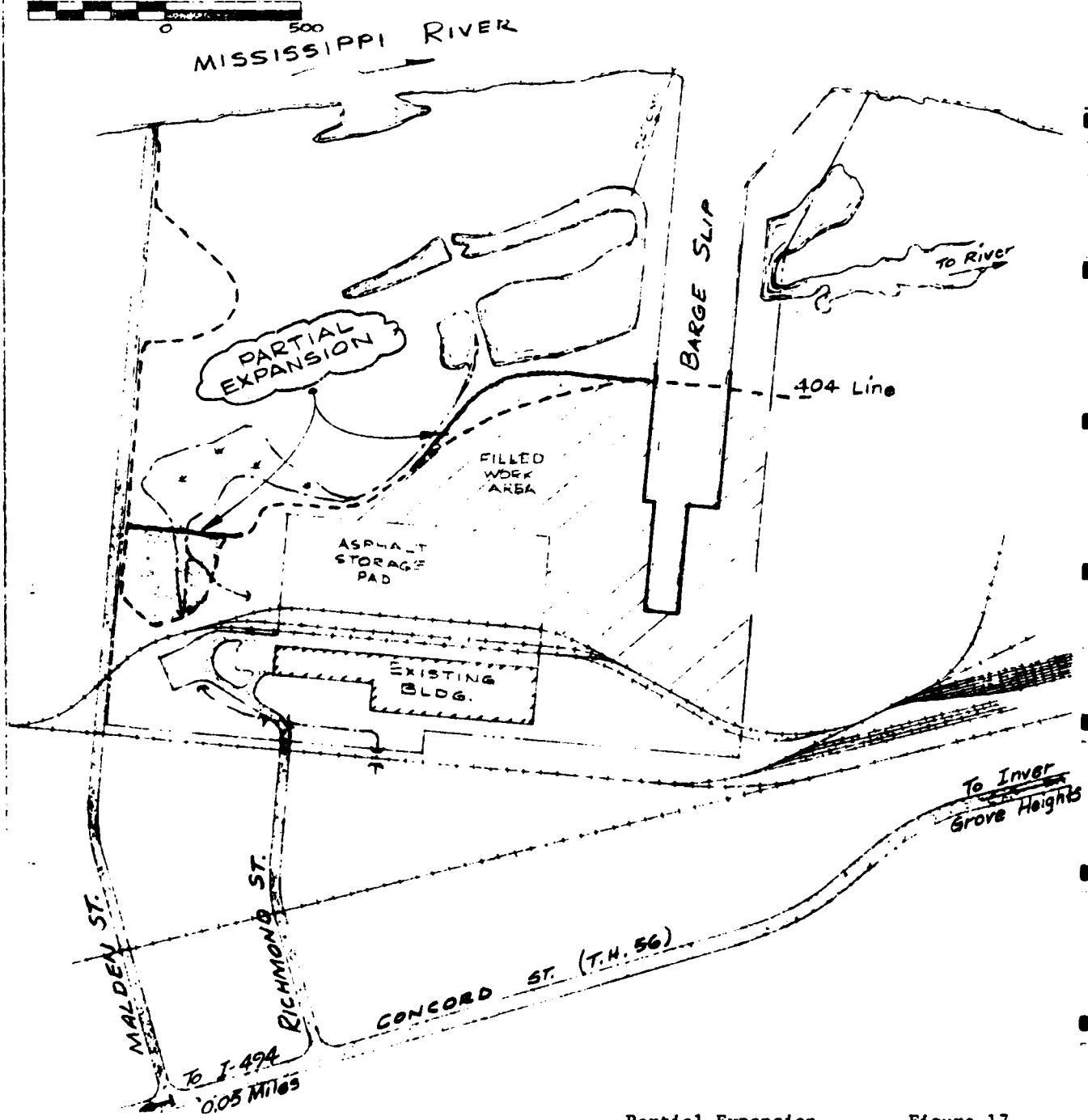
1. The wetlands would remain undisturbed
2. The currently unavailable Rock Island property to the south may become available, allowing expansion on an upland site.
3. Operation of the existing terminal would give Packer better insight as to their spatial needs.

The disadvantages are:

1. The economic benefits of expansion would be deferred.
2. Inflation would raise Packer's development costs.
3. It is more advantageous for Packer to design the ultimate facility now than attempt to expand at a later date.
4. The availability of the Rock Island property in the future is uncertain.



+ RIVER MILE 831.6
NORMAL POOL 687.2
1965 HIGH WATER 705 ±



Partial Expansion

Figure 17

7.0 THE RELATIONSHIP BETWEEN LOCAL SHORT-TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE OF LONG-TERM PRODUCTIVITY

7.1 Once filled, the 22-acre wetland parcel would probably remain in industrial and/or commercial usage indefinitely. If abandoned or sold by Packer, the area either would be left vacant or utilized by the purchasing entity.

7.2 The area would never return to wetlands unless the fill material were removed. Because of the economics involved, this probably would never happen.

7.3 The biological productivity of the area would be severely curtailed while in commercial usage. If the area is paved over, this condition would be semi-permanent.

7.4 If taken out of commercial-industrial usage, the property would not be so biologically productive as the wetland to be filled. Also, the area would not be able to accomplish the functions currently being performed by the wetland, such as water quality maintenance and flood storage.

7.5 The value of the short-term commercial-industrial use of the site would depend on the user. Paragraphs 4.22 to 4.24, pages 51 and 52 of this document, describe the benefits to be derived from usage of the 22-acre parcel by Packer. If and when Packer ceases to use the site, the subsequent users of the property would determine the socio-economic benefits to be derived from the 22-acre parcel.

8.0 IRREVERSIBLE AND IRRETRIEVABLE COMMITMENTS OF RESOURCES WHICH WOULD BE INVOLVED IN THE PROPOSED ACTION SHOULD IT BE IMPLEMENTED

8.1 Approximately 22 acres of wetlands would be filled and permanently lost. Approximately 185,000 cubic yards of commercial fill would be used. Hydrocarbon fuels and human effort would be used in the preparation of the site.

8.2 The 22 acres would be permanently converted from open space/wetland usage to commercial/industrial usage. Approximately 295 acre/feet of flood storage at the 100-year flood level would be lost.

9.0 COORDINATION

9.1 On 16 October 1975 Packer applied for a permit to fill the wetlands landward of the Minnesota Department of Natural Resources (DNR) floodway line. On 23 December 1975 a public notice of the project was issued.

9.2 On 26 January 1976 the EPA stated that not enough information was available to satisfy the requirements of Section 5(b)(8) of the Guidelines for Evaluating the Discharge of Dredged or Fill Material in Navigable Waters (40 C.F.R. 230). The EPA also outlined the additional information necessary to satisfy the requirements of the guidelines.

9.3 On 3 February 1976 the Department of Interior (DOI) stated they would not object to the permit provided Packer fulfilled their agreement to donate the approximately 28-acre parcel of land to the city of South St. Paul as previously agreed (see paragraph 1.013 page 2).

9.4 On 15 March 1976 Packer submitted a revised application further delineating their proposal. On 29 March 1976 an interagency coordination meeting was held concerning the proposed project. Represented at that meeting were Packer, Corps, EPA, DOI, Minnesota DNR, Minnesota Pollution Control Agency (MPCA), and the city of South St. Paul.

9.5 On 28 April 1976 the District Engineer informed Packer that an environmental impact statement would be prepared on the project. On 4 May 1976 Packer requested the Corps consider an "alternative" 404 line that would allow expansion of the Section 10 project. On 18 June 1976 the Corps informed Packer that the Section 404 line could not be relocated.

9.6 Packer was informed that it is the responsibility of the applicant to provide much of the background information needed in the preparation of an impact statement. Packer decided to hire a consulting firm to gather some of this information. On 30 September 1976 Packer, the Corps, and the consulting firm met to inform the consulting firm of the background information that was necessary for the Corps to prepare a draft environmental impact statement.

9.7 On 4 January 1977 the Minnesota DNR authorized the proposed fill.

9.8 On 25 January 1977 Packer submitted a report containing the background information agreed to in the 30 September 1976 meeting. A copy of the report was sent to Region V, EPA for their review.

9.9 On 17 February 1977 the EPA recommended denial of the application as the proposal does not satisfy Section 5(b)(8) of the Guidelines for Evaluating the Proposed Discharge of Dredged or Fill Material in Navigable Waters (40 C.F.R. 230) (exhibit 3).

9.10 On 18 February 1977 the MPCA waived water quality certification of the project.

9.11 We have conducted an evaluation of the proposal per the requirements of Section 404(b) of PL 92-500. This evaluation is contained in exhibit 4.

9.12 Copies of the draft statement were furnished to the following known interests for review and comment:

U.S. Environmental Protection Agency
U.S. Department of Agriculture
U.S. Department of Commerce
U.S. Department of Health, Education, and Welfare
U.S. Department of Housing and Urban Development
U.S. Department of the Interior
U.S. Department of Transportation
Advisory Council on Historic Preservation

Minnesota Department of Agriculture
Minnesota Department of Business
Minnesota Department of Economic Development
Minnesota Department of Health
Minnesota Highway Department
Minnesota Department of Manpower
Minnesota Department of Natural Resources
Minnesota State Park Commission
Minnesota State Planning Agency
Minnesota Environmental Quality Council
Minnesota Pollution Control Agency
Minnesota Recreation and Park Administration Department
Minnesota Department of Taxation
Minnesota State Archaeologist
Minnesota Historical Society
Minnesota Railroad and Warehouse Commission
Minnesota Water Resources Board

Environmental Quality Council, Citizens Advisory Committee, Minnesota
Friends of the Earth, Minnesota Branch
Izaak Walton League of America, Minnesota Division
League of Minnesota Cities
Minnesota Environmental Control Citizens Association
Minnesota League of Women Voters
Minnesota Public Interest Research Group
National Audubon Society, North Midwest Regional Office
The Nature Conservancy, Minnesota Chapter
Minnesota Pheasants Unlimited
Soil Conservation Society of America
Minnesota Waterfowl Association
Wildlife of America
Northern Environmental Council
Packer River Terminal, Inc.
Sierra Club, Northstar Chapter

9.13 Copies of the draft statement were also sent to the following libraries, to be held as reference material available to the general public for review:

Environmental Library of Minnesota
1222 Fourth Street Southeast
Minneapolis, Minnesota

Legislative Library
State Capitol
St. Paul, Minnesota

Minneapolis Public Library
Environmental Conservation Library
and Document Division
300 Nicollet Mall
Minneapolis, Minnesota

University of Minnesota
Government Publications Division - M
409 Wilson Library
Minneapolis, Minnesota

University of Minnesota
Agricultural Library
Documents Division
St. Paul Campus
St. Paul, Minnesota

Document Collection
St. Paul Public Library
St. Paul, Minnesota

9.14 Comments on the draft environmental impact statement were received from the following:

U.S. Environmental Protection Agency
U.S. Department of Agriculture
U.S. Department of the Interior
U.S. Department of Transportation
Minnesota Department of Transportation
Minnesota Department of Natural Resources
Minnesota Pollution Control Agency
Minnesota Historical Society
City of South St. Paul
Packer River Terminal, Inc.

9.15 The letters of comment received, along with Corps responses, follow on the ensuing pages.

9.16 Single copies of this final environmental impact statement are available at the Corps of Engineers, St. Paul District Office, 1135 U.S. Post Office and Custom House, St. Paul, Minnesota 55101.

LETTERS of COMMENT
and
CORPS RESPONSES



UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY

REGION V
230 SOUTH DEARBORN ST
CHICAGO ILLINOIS 60604



JUN 24 1977

Colonel Forrest T. Gay, III
District Engineer
Department of the Army
St. Paul District, Corps of Engineers
1135 U.S. Post Office & Custom House
St. Paul, Minnesota 55101

Dear Colonel Gay:

We have completed our review of the Draft Environmental Impact Statement (EIS) for the proposed barge terminal expansion by Packer River Terminal, Inc., in South St. Paul, Dakota County, Minnesota. Your letter of May 3, 1977, requested our review and comments on this proposed expansion. The subject of the EIS is the desire by the Packer River Terminal to expand its facilities into a wetland area on their property. The wetland area extends from the west bank of the Mississippi River westward to the 404 line. This 404 line was established by the Corps of Engineers and EPA personnel on June 3, 1975. The desired expansion would fill approximately 22 additional acres of wetlands beyond this established 404 line.

Our Agency has previously provided comments on the Section 10 permit for the construction of the barge slip and on the environmental assessment for the desired expansion. In letters of January 26, 1976, and February 17, 1977, respectively, we have stated our position in regard to this project. In these letters we indicated our belief that the desired action was in direct conflict with our Wetland's Policy.

The additional information provided in the Draft EIS has not changed our position. The wetland areas which would be filled are valuable and unique and should remain in their present condition. Furthermore, we believe this proposed action violates the spirit and intent of President Carter's executive order on wetlands. Executive Order 11990 states each Agency is to provide leadership to minimize the destruction loss or degradation of wetlands and to preserve the natural and beneficial values of wetlands. While this executive order is not applicable to private developments, we believe the intent to protect wetland areas is clearly indicated.

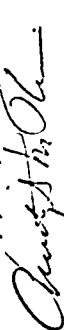
Taking into consideration the value of the wetlands which would be affected, our Wetland's Policy, your agency's wetland policy and E.O. 11990, we recommend the 404 permit for fill be denied.

In regard to the existing operations at the facility, additional information on air quality is necessary. The levels of total suspended particulates (TSP) are high in the South St. Paul area. On site monitoring should be conducted to determine the contribution to the areas TSP levels. Information on the type of commodities to be handled and the control procedures to be used should be provided. Documentation provided was insufficient to allow independent estimates of the emissions from the existing source and verification of control efficiencies.

Based upon our review, we have rated the project as EU (environmentally unsatisfactory) and classified the EIS as Category 1 (sufficient information). The date and classification of our comments will be published in the Federal Register in accordance with our responsibility to inform the public of our views on other agencies' projects.

We appreciate the opportunity to review this Draft EIS. Since we do not believe the permit should be issued, we also do not feel that a Final EIS need be prepared. If you have any questions in regard to our comments, please contact Mr. William D. Franz at 312-353-2307.

Sincerely yours,



Christopher Timm
Director
Surveillance & Analysis Division

Corps Responses to the Environmental Protection Agency

1. The existing terminal operation is just beginning and Packer is delaying final design of the facility until a decision is made on the Section 404 permit application. The establishment of an air quality monitoring system would not provide meaningful data given the time constraints inherent in the review of this application.
2. The information on commodity types and control procedures presented in the draft EIS is the best available at this time. Since Packer is delaying final design of the terminal as stated above, more detailed information will not become available. Because of the normal yearly fluctuations in the barge freight business, the data on projected commodities and tonnages are the best estimates the applicant could give on their anticipated operation.
3. We have considered your comment in our decision to proceed with the final EIS.

UNITED STATES DEPARTMENT OF AGRICULTURE
FOREST SERVICE
NORTHEASTERN AREA STATE AND PRIVATE FORESTRY
6816 MARKET STREET, UPPER MERION, PA. 19082
(215) 596-1671

8430
July 5, 1977



Forrest T. Gay, III
Colonel, Corps of Engineers
St. Paul District
1135 U.S. Post Office & Custom House
St. Paul, Minnesota 55101

Refer to: NSCED-ER, Draft
Environmental Statement,
Packer River Barge Terminal
Expansion, South St. Paul, MN

Dear Colonel Gay:

We believe that as much as possible of the 22 acres of wetlands should be preserved, because of the losses of wetland that have already occurred.

To help us assess the restoration of vegetation on dikes we would like the final statement to show what kinds of seeds were used for hydraulic seeding.

The final statement should also give consideration to the movement of part of the potential barge freight by rail.

Thank you for the opportunity to comment on this statement.

Sincerely,

DALE O. VANDENBURG
Staff Director
Environmental Quality Evaluation

Corps Responses to the Forest Service

4. This information has been included in the final EIS (paragraph 1.26, page 13).

5. It is noted in paragraph 6.3, page 63, of the final EIS that if the permit application is denied, other transportation facilities in the Twin Cities area would handle the commodities if the demand is present. We feel it is beyond the scope of this document to delve into an analysis of the transportation mode best suited to handling commodity flows to and from the Twin Cities area.



United States Department of the Interior

OFFICE OF THE SECRETARY
NORTH CENTRAL REGION
DANIELS BUILDING
DENVER, COLORADO 80202

ER 77/440

June 30, 1977

Colonel Forrest T. Gav III
District Engineer
U.S. Army Engineer District, St. Paul
1135 U.S. Post Office & Custom House
St. Paul, Minnesota 55101

Dear Colonel Gav:

This responds to your May 3, 1977 letter requesting Department of the Interior review of the draft environmental statement for Barge Terminal Expansion, Packer River Terminal, Inc., Dakota County, Minnesota.

2.0 Environmental Setting-Wildlife

Birds - paragraph 2.46, page 34 - The statement should note that the project area in fact receives considerable use from great blue herons rather than occasional use as indicated in this paragraph.

Fish - paragraph 2.50, page 35 - The penultimate sentence in this paragraph is in error. A culvert does exist through the described road. Personnel of the U.S. Fish and Wildlife Service and U.S. Environmental Protection Agency noted this culvert during a January 1977 wildlife survey of the Packer River site.

4.0 Environmental Impacts of the Proposed Action

Water Pollution Potential - paragraph 4.33, page 52 - We found no evaluation of the effects of Mississippi River floods on the terminal site. Although dikes up to the level of the 1965 flood would be constructed between the site and the river, it appears that flood waters could bypass these dikes through the barge slip itself. Since potential water contaminants would be stored at the site, their fate during Mississippi River floods should be discussed.

The statement should also include consideration of the function of the wetlands with respect to ground water recharge or discharge and should evaluate impacts of the project on that function.

Sincerely yours,

David L. Jervis
David L. Jervis
Regional Environmental Officer

Corps Responses to the U.S. Department of the Interior

6. The referenced paragraph has been changed to reflect this (paragraph 2.46, page 34).

7. The referenced paragraph has been changed to reflect the presence of the culvert (paragraph 2.50, page 35).

8. The terminal would be protected to elevation 705. Mississippi River floodwaters would not be able to bypass the dikes and flood the terminal. The detention pond would have a control gate for flood protection.

9. A discussion has been added to the final EIS (paragraph 4.59, page 61).



DEPARTMENT OF TRANSPORTATION
UNITED STATES COAST GUARD

16475
Ser 053
7 June 1977

Department of the Army
St. Paul District, Corps of Engineers
Attn: NSCED-ER
1135 U.S. Post Office and
Custom House
St. Paul, MN 55101

Gentlemen:

We have reviewed the draft environmental impact statement for Barge Terminal Expansion Packer River Terminal, Inc., South St. Paul, Dakota County, Minnesota. We have no comment to offer on this document.

Thank you for the opportunity to review this environmental impact statement.

Sincerely,

C. E. Johnson, Jr.
C. E. JOHNSON, JR.
Environmental Protection Specialist

By direction of the District Commander

Copy to:
COMDT (G-WEP-7)
DOT SECREP Region V
DOT (tes), Office of Environmental Affairs
CEQ (5)



U S DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION

REGION 5
18209 DIXIE HIGHWAY
HOMERWOOD ILLINOIS 60430

May 17, 1977

IN REPLY REFER TO

HED-05

District Engineer
St. Paul District, Corps of Engineers
1135 U.S. Post Office and Custom House
St. Paul, Minnesota 55101

Dear Sir:

The draft environmental statement for the proposed barge terminal expansion in South St. Paul, Dakota County, Minnesota has been reviewed. We find that the highway system is not affected by the proposal and, therefore, we have no comments on the statement.

Sincerely yours,

Donald E. Trull
Regional Administrator

By: W. G. Emrich, Director
FOR Office of Environment and Design



Minnesota Department of Transportation
Transportation Building, St. Paul, MN 55155

Phone 296-8529

June 14, 1977

Colonel Forest T. Gay III
District Engineer
Saint Paul District Corps
of Engineers
1135 U.S. Post Office and
Custom House
Saint Paul, Minnesota 55101

In reply refer to: 702
Draft Environmental Impact Statement
Barge Terminal Expansion
Packer River Terminal, Inc.
Dakota County
South Saint Paul, Minnesota

Dear Sir:

The Minnesota Department of Transportation has reviewed the Draft EIS on the Proposed Packer River Terminal, Barge Terminal expansion. We wish to make the following comments relating to transportation.

- 10 The Interstate 494 Mississippi River bridge is upstream from the Packer site. Although channel dredging is not currently proposed, we would be concerned if the status of this changes as dredging of the main channel would induce scour at the highway bridge piers.
- 11 The Draft EIS does not mention the 120" storm sewer for Interstate 494 located in Malden Street, at the north edge of the proposed development. We assume that this facility will not be affected.
- 12 Questions that the Final EIS should address include whether the site can accommodate the peak truck traffic estimated to occur without back-up onto public streets, across railroad tracks or infringe on traffic operations on Trunk Highway 56 (Concord Street).

- Corps Responses to the Minnesota Department of Transportation
10. As stated in this comment, channel dredging is not proposed. Any channel dredging in the future would require a Department of the Army permit from this office. Any concerns you may have about potential adverse effects upon the I-494 bridge can be addressed at that time.
 11. The referenced storm sewer would not be affected by the project.
 12. This information is included in paragraph 4.18, page 51 of the final EIS.

Page Two
Colonel Forest T. Gay III
June 14, 1977

We appreciate this opportunity to review the proposal. Please send us a copy of the Final EIS.

If you have any questions regarding our comments, please contact Merritt Linzie at (612) 790-2311.

Sincerely,



Harry A. Reed
Deputy Commissioner
Bureau of Policy & Planning

cc: Charles Kenow - Minnesota Environmental Quality Council Staff



STATE OF
MINNESOTA
DEPARTMENT OF NATURAL RESOURCES

CENTENNIAL OFFICE BUILDING • ST. PAUL, MINNESOTA • 55155

DNR INFORMATION
612-296-6157

August 2, 1977

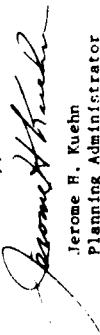
Colonel Forrest T. Gay III
District Engineer
St. Paul District, Corps of Engineers
1135 U.S. Post Office and Custom House
St. Paul, Minnesota 55101

Re: NSCEP-FR - DEIS concerning
a barge terminal expansion
for Packer River Terminal, Inc.
in South St. Paul, Dakota County

Dear Colonel Gay:

On January 4, 1977 the Department of Natural Resources issued a
permit on the above cited project.
We have no further comments to offer.

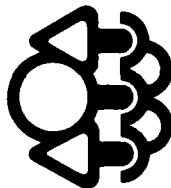
Sincerely,



Jerome H. Kuehn
Planning Administrator

JHF: dh

cc: Larry Seymour
Oliver Jarvenpa
Milt Krons
Al Wald



Minnesota Pollution Control Agency

July 1, 1977

U.S. Army Corps of Engineers
St. Paul District
1135 U.S. Post Office and
Custom House
St. Paul, Minnesota 55101

Subject: Draft EIS Proposed
Barge Terminal Expansion,
Packer River Terminal, Inc.
South St. Paul,
Dakota County Minnesota

Dear Sir:

Agency staff have received and reviewed the above mentioned draft EIS. The following comments should be addressed so that the Agency may assess the potential environmental impacts as a result of the proposed expansion.

Water Quality

1. Page 13. The discussion of the retention and storage basins does not resolve the question as to whether there is a need for a State Disposal System Permit and/or an NPDES Discharge Permit. A discussion and determination of this issue should be resolved in the DEIS.

2. Page 52. The discussion on this page regarding stockpile runoff includes only salt piles. There should be a discussion on the impacts of runoff from the coal pile. Coal pile runoff is commonly characterized as having a low pH and high concentration of total dissolved solids including iron, magnesium and sulfate. Undesirable concentrations of aluminum, sodium, manganese and other metals may also be present. Contact of coal with air and moisture results in oxidation of metal sulfate present in the coal to sulfuric acid. A good discussion of coal pile runoff is contained in Development Document of Effluent Limitations Guidelines and New Source Performance Standards for the Steam Electric Power Generating Point Source Category.

-- over --

1935 West County Road 82 Roseville Minnesota 55113
Regional Offices: Duluth, Brainerd, Fargo, St. Cloud, Thief River Falls, Bemidji, Grand Rapids, Hibbing, Iron Range, Mankato, Marshall, Moorhead, New Ulm, North Branch, St. Cloud, St. James, St. Louis Park, St. Paul, Stillwater, Twin Falls, Wadena, Waseca, Winona.

Corps Responses to the Minnesota Pollution Control Agency

13. At the present time, the final design has not progressed to the point that a positive determination on this issue can be made. Paragraph 1.28, page 13, of the final EIS points out that such permits may be necessary.

14. Packer does not plan on having a coal pile. Coal would be delivered and immediately transferred to another transportation mode or placed in inclosed storage.

Air Quality

1. Under Section 2.8 an indication is presented that plan controls on the Metropolitan Waste Control Commission Pig's Eye Treatment Plant will substantially reduce its influence on the air quality monitoring station at Pig's Eye. It must be emphasized that according to scheduled construction and improvement activities at this plant, significant reductions in emissions may not occur until as late as 1982. In addition, the possible substantial reduction does not necessarily indicate a substantial reduction in the ambient air quality monitored at the Pig's Eye monitoring location.

2. Page 22. In the last sentence of Section 2.8 the 24-hour TSP peak is indicated as 302 g/m^3 . According to APC 1, primary standards of 260 g/m^3 must be exceeded twice for a violation to occur. Therefore, it must be noted that the second high 24-hour TSP recording at this site was 252 g/m^3 .

3. Page 22. Section 2.9 discusses MPCA monitoring station No. 430. It must first be noted that this station was terminated in November of 1976. The annual geometric mean cited in this section is incorrect. This should be 50 (not 60) g/m^3 . In addition, the 24-hour recordings were a maximum of 133 and a second high of 124 g/m^3 .

4. Page 23. The primary standard cited for hydrocarbons on this table is incorrect. The primary and secondary standards are identical.

5. Pages 50 and 51. The discussion of potential of air quality impacts from the proposal is vague and incomplete. It is indicated that only sand/aggregates and salts will be associated with the additional land development. These two commodities are estimated to be approximately 150,000 tons per year; yet on pages 9, 10, and 11 a discussion is presented which indicates that there is to be up to 3,000,000 tons per year of total throughput of various commodities. In addition, on page 18 it is stated that the filled areas would allow handling of an additional 635,000 tons of material. Therefore, Table 12 on page 51 which indicates potential particulate emissions, does not seem to be complete if, in fact, coal and other commodities will be restricted from the new fill area. The controls and management procedures for this restriction should be discussed. A further difficulty with the discussion on particulate emissions is that there is no detailed description of the materials handling equipment and method which would be part of the proposed project. Information should be provided on the conveyors, load out spouts, storage facilities, reclaim facilities, cranes, shovels, etc. A description of these methods and procedures are essential in evaluating air quality emissions and impacts. It is impossible to analyze these impacts without an identification of the exact emission sources.

Corps Responses to the Minnesota Pollution Control Agency (cont.)

15. The referenced paragraph has been changed to reflect this. (paragraph 2.8 page 22).

16. This has been noted in the referenced paragraph (paragraph 2.8 page 22).

17. The referenced paragraph has been changed to reflect this (paragraph 2.9, page 22).

18. The table has been corrected (page 23).

19. As stated in paragraph 1.16, page 9, Packer has not to obtain long-term commitments from potential users of the terminal. Thus, the best available data are what they believe their commodity mix and volume would be. As shown in table 1 on page 10, their estimate is that the existing facility will handle about 2,550,000 tons per year, with 2,250,000 tons being commodities whose handling would produce particulate emissions (grain, fertilizer, salt, and coal). The proposed expansion would allow Packer to handle an additional 635,000 tons, 150,000 of which being products that produce particulate emissions (sand/aggregates and salt). This constitutes the 2,400,000 tons analyzed for potential particulate emissions in table 12 on page 51. The total capacity of the facility if the 404 permit is granted would be about 3,185,000 tons per year (2,400,000 tons particulate-producing commodities plus 785,000 tons of non-particulate producing commodities).

20. Through the Corps permit process there is no way to regulate management procedures on the terminal to control commodities, and the Corps does not believe they should become involved in this. At this time, Packer has not finalized their plans for the terminal as they must wait for the decision on the 404 permit before they will know how much land will eventually be available. Detailed information on management procedures, handling equipment, storage facilities, etc., is not available beyond that contained in the EIS. The product flow through the terminal will be regulated by the capacity of the terminal and the market demand for various products.

21. We realize that it is impossible to precisely evaluate air quality emissions and impacts without detailed descriptions of volumes, equipment, reclaim facilities, etc. Our evaluation is based upon the best available information. The detailed information you have referred to is not available at this time and will not be until final design of the facility is completed.

6. The proposed project is to be located in an area which is non-attainment for particulates. Therefore, this project may come under the EPA Trade-off policy. The nature of this policy is discussed in the Federal Register, Volume 41, #246, Tuesday, December 21, 1976, pages 5528 through 5530. A discussion of the relationship between this trade-off policy and the proposed action should be presented.


7. Since only 150,000 out of a potential 635,000 tons of commodity capacity are evaluated in the table on page 51, information is not sufficient to find the subsequent air quality degradation as "minor" as indicated on page 59 Section 5.4

Noise

1. As a result of Minnesota Statutes 116.07 and according to Minnesota Regulations NPC 1, NPC 2, and NPC 4, noise is, in Minnesota, considered an environmental pollutant. For this reason it is improper to include a noise level assessment in an environmental impact statement in a section entitled, "Social Effects."

2. The analysis of noise impacts as presented in Section 4.2 on page 46 is incomplete. No quantification of existing or projected ambient noise levels is presented. No indication of the distance to the closest sensitive receptor is presented. It should be noted that noise impacts affect both human and animal life. No discussion is presented regarding these impacts. In summary, there is no way based on the discussion presented, to evaluate the extent of noise impacts as a result of the proposed action.

If you have any questions about these comments, please call me at 296-7358.

Singerely,

Aaron Katz
Assistant Coordinator
Office of Environmental Analysis

AK/re

cc: C. A. Johannes
Dale McMichael
Curt Sparks
Al Perez
Brad Beckham
Dick Starn

22. Paragraph 4.29, page 53, of the final EIS discusses this topic.

23. Air quality effects are discussed in paragraphs 4.24 through 4.29. Table 12 lists the potential for particulate emissions only as outlined in response 19 above. Based upon available information, we believe the proposed expansion would result in minor air quality degradation.

24. In our assessment of environmental effects we consider the social, economic, and natural settings as part of the environmental setting. The emphasis on noise pollution is usually in the area of human impact; thus, the inclusion of the discussion under social effects.

25a. No data are available on the existing background noise environment because the existing levels at the site at present would be influenced by the construction of the Section 10 facility and would not be representative of the area with the Section 10 facility in operation. Noise projections for the future are unobtainable due to the nebulous nature of the proposal. Packer has not yet planned the facility to the extent that it is known what type of equipment will be used at the terminal, where it would be located, or how often it would be used.

25b. Information on the location of the closest sensitive receptor is included in paragraph 4.3, page 36.

25c. The discussion of noise and disturbance effects on wildlife is included in paragraph 4.55, page 61.

25d. We agree that there is no way at this time to numerically assess the impact of the proposed facility on the local noise environment. However, we believe that a subjective assessment can be made based upon the type of facility proposed and the nature of the area.



MINNESOTA HISTORICAL SOCIETY

690 Cedar Street St. Paul, Minnesota 55101 • 612 296-2747

17 May 1977

Colonel Forrest I. Gay
District Engineer
St. Paul District
Corps of Engineers
1135 U.S. Post Office and Custom House
St. Paul, Minnesota 55101

Attention: Permits and Statistics Branch

Dear Colonel Gay:

RE: NSCED-ER
Packer River Terminal, Inc.
Barge Terminal Expansion
South St. Paul,
Dakota County

The project described above has been reviewed pursuant to responsibilities given the State Historic Preservation Officer by the National Historic Preservation Act of 1966 and the Procedures of the National Advisory Council on Historic Preservation (36CFR800).

This review reveals the location of no sites of historic, architectural, cultural, or archaeological significance within the area of the proposed project. There are no sites in the area which are on the National Register or eligible for inclusion on the National Register, and, therefore, none which may be affected by your proposal.

Sincerely,

Russell W. Fridley
Russell W. Fridley
State Historic Preservation Officer

RWF/fr

CITY OF
SOUTH ST. PAUL

August 11, 1977

Colonel Forrest T. Gay, III
District Engineer
Department of the Army
St. Paul District, Corps of Engineers
1135 U. S. Post Office & Customs House
Saint Paul, Minnesota 55101

Re: Draft Environmental Impact Statement
Packer River Terminal, Inc. Barge Terminal Expansion

Dear Colonel Gay:

As Mayor of the City of South St. Paul, it is imperative that I comment on the proposed development of the 404 lands by Packer River Terminal before your decision is made as to whether or not to issue the requested permit.

I have thoroughly reviewed this proposal and have discussed this matter with key local advisory groups. It is my request that you issue the proposed 404 permit.

Packer River Terminal, on a 50 acre site, is situated in such a way that the entire site (as it exists or if expanded) is screened from all abutting neighbors, all other city residents and river traffic. The operation of the terminal generates a positive economic impact creating new jobs, adding to the local economy and generating a tax base. This economic impact is further expanded with use of the 22 acre site requested in the 404 permit.

The Economic Development Authority of the City of South St. Paul has reviewed the entire Packer River Terminal Proposal. The Authority supports the request for the 404 permit as indicated in the enclosed resolution. They support the 404 permit not only for economic reasons but for those same conditions identified by the enclosed letter dated August 11, 1977 from the Environmental Commission of South St. Paul.

It is my hope that you will consider these comments and authorize approval of the 404 permit. If you have any questions concerning these comments, please contact me at your convenience.

Sincerely,

Charles A. Michelson
Charles A. Michelson, Mayor
City of South St. Paul

CAM/jjs
Enclosure

WHEREAS, the South St. Paul Economic Development Authority is striving to promote new industry in the community, and

WHEREAS, the South St. Paul Economic Development Authority has reviewed the proposed conceptual schematics for the project,

NOW THEREFORE BE IT RESOLVED, that the South St. Paul Economic Development Authority supports the development of Packer River Terminal as presented.

MOTION MADE BY: Robert Hutchinson

MOTION SECONDED BY: Laurence Broom

DATE: May 17, 1977 13 AYES 0 NAYS



CITY OF
SOUTH ST. PAUL

125 THIRD AVENUE NORTH
SOUTH ST. PAUL, MINN 55075

August 11, 1977

Hon. Charles A. Michelson
Mayor of the City of South St. Paul
125 Third Avenue North
South St. Paul, Minnesota 55075

Dear Mayor Michelson:

The Environmental Commission of the City of South St. Paul is unanimous in its recommendation for the development of the proposed barge terminal expansion at the Packer River Terminal in South St. Paul, Minnesota. This recommendation is based on a positive assessment of the local environmental impact, the environmental worth of the terminal to the Mississippi River Basin and the economic value of this project on both a local and a regional basis.

Our first consideration was the local environmental impact of the proposed terminal facility. We consider the proposed plan for the handling of bulk materials to be a sound one. This is based on the following considerations after a presentation of the comprehensive plan:

- a. The use of negative pressure, with enclosed hopper cars and the use of Bag House filters to control particulate emissions during unloading.
- b. The use of enclosed conveyance of bulk commodities.
- c. The use of a loading and unloading system to minimize particulates and the probability of spillage during handling.
- d. The ability to localize spills to the barge slip area.
- e. The use of enclosed storage for commodities on the 404 land.
- f. The proposed development of the dedicated land to absorb wildlife and meet the needs of South St. Paul residents.
- g. The water retention basin designed as part of this proposed development should serve the run-off treatment function.

The second consideration was of the environmental worth of the proposed facility; i.e., its ability to resolve environmental problems. The proposed expansion should have a beneficial effect on shipment of high quality low-sulphur Western coal into all areas of the Mississippi Basin. This will help

Mayor Michelson

-2-

August 11, 1977

to improve air quality in industrial regions and in areas where power plants are located. The proposed expansion is timely with increasing demand for low-sulphur coal. It should have a positive effect on the balance of low-sulphur and higher sulphur content coal resulting in more use of low-sulphur coal and a resultant improvement in air quality.

We recognize the national need for dependable low-cost sources of energy, with minimal adverse environmental effect. That need will be aided by well-planned programs of expansion of the type proposed by Twin City Barge and Towing Company. The unthinkable alternative is a make-do plan produced by public pressure and panic with our next energy crisis.

This facility's expansion should have a beneficial effect on lower cost movement of fertilizers into the Upper Mississippi River Basin, one of the world's great areas of surplus food production. Ease of transport and storage of these materials should have a beneficial effect on insuring optional agricultural production. This terminal facility should also assist in moving grain, corn, soybeans etc. efficiently and economically from our area to national and international areas of consumption.

Finally, the proposed facility should have positive economic impact of a local and a regional nature. The efficient movement of energy sources is the best measure for the prevention of energy shortages of the type we noted during the winter of 1977 and their immense cost to regional economies. The efficient movement of food products lowers the cost of end products consumed by all persons and serves to control national inflation.

The local impact of the proposed facility to South St. Paul can be measured in human terms. The approximately 35 full-time jobs with an annual payroll of \$507,500 and the addition of 15 jobs in related industries would be a forward step in South St. Paul's economic recovery. The proposed facility represents an expansion of South St. Paul's tax base that has been eagerly sought. These developments should be generated without placing substantial additional service needs upon the city. Finally this project agrees with national goals for the creation of employment opportunities through industrial/commercial development in aging cities.

Consequently, it is the opinion of the Environmental Commission of South St. Paul that the proposed development of the 404 lands be permitted to go forward and that the 404 permit for fill be granted.

Sincerely,

William J. Olson

William J. Olson, Acting Chairperson
South St. Paul Environmental Commission

WJO/jjs

AD-A121 195

PROPOSED BARGE TERMINAL EXPANSION PACKER RIVER TERMINAL 272
INC SOUTH ST PAUL DAKOTA COUNTY MINNESOTA(U) CORPS OF
ENGINEERS ST PAUL MN ST PAUL DISTRICT SEP 77

UNCLASSIFIED

F/G 13/10

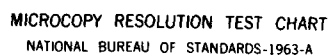
NL

END

FILED

1

DTIC



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

PACKER RIVER TERMINAL, INC.

1303 RED ROCK ROAD • P.O. BOX 3032 • ST. PAUL, MINNESOTA 55165

TELEPHONE:

ST PAUL 612 735-5440

July 1, 1977

District Engineer
St. Paul District
Corps of Engineers
1135 U. S. Post Office
and Custom House
St. Paul, Minnesota 55101

ATTN: General Regulatory Branch

SUBJECT: Draft Environmental Statement
Proposed Barge Terminal Expansion
Packer River Terminal, Inc.
South St. Paul, Dakota County, Minnesota

Gentlemen:

I have reviewed the subject Draft, and take this opportunity to thank you for what I feel represents a rather objective review of our terminal expansion proposal. I would like, however, to make certain comments which I feel are responsive to the draft and the issues raised.

I think it is imperative that a review of the Draft Statement be accomplished in full recognition of certain critical factors which are not as clear as they might be from a reading of the material. They are as follows:

1. The expansion area, which is the subject of the Draft, is a total of 24.57 acres, 21.97 acres of which are termed "wetlands" pursuant to Section 404 of P.L. 92-500. Of the total 24.57 acres, 8.96 acres are a part of Packer's original property holding, and the balance is property which Packer was asked to acquire. The 8.96 acres is shown in the figure on page "6" of the Draft, and is also represented as "Parcel C" in the figure on page "15" of the Draft. As noted above, Packer was asked to acquire (as a mitigating measure in concert with the Section 10 Permit issued in July of 1975) a large parcel of land, also shown in the figure on page "15", which was some 45 to 50 acres in size - constituted by "Parcels A-1", "A-2", "B", and the larger parcel shown adjacent to the river and northerly of the

Corps Responses to Packer River Terminal, Inc.

26. At no time did the Corps of Engineers ask Packer to acquire additional property or become involved in an "understanding" that Packer would be permitted at a future date to expand to compensate for the purchase of the property. Packer was aware of the permit review procedures and knew that if the Department of Interior objections were not resolved at the local level, a decision on the Section 10 permit would take considerable time. Packer was aware that any fill encroaching onto the wetlands would be subject to review under the Section 404 permit process.

27. Table 1 has been corrected.

26

barge slip, on the figure on page "15". This "larger parcel" was delineated by the river to the east, the barge slip, the roadway (Malden Street) to the north, and the "dike" shown on the figure. The dike location, on the figure on page "15", was responsive to the Minnesota DNR's establishment of the floodplain encroachment line in South St. Paul, as is shown in the figure on page "5" of the Draft. The "larger parcel" mentioned above, was to be dedicated to the public, as noted on page "5", and Packer was to be permitted the use of the balance to partially offset the acquisition costs. Because the balance was considered "wetland area," such an understanding was to be legitimized via a Section 404 Permit Application - thus the process which has led to the Draft Statement. Parties to this understanding included the City of South St. Paul, the Corps of Engineers, the U. S. Fish and Wildlife Service, and the Minnesota DNR.

88

Packer's 404 Application was filed on October 16, 1975, and is now being finalized through the current EIS process. This clarification of background is properly inserted between sections "1.9" and "1.10", on page 4 of the Draft. In addition, paragraph "1.3" should reflect the fact that the Corps was reluctant to consider the permit (Section 10) further, until the Fish and Wildlife Service was accommodated. Thus, an "on its own merits" review was not a reality in fact.

2.

With respect to commodities, the development of the Packer facility, to include the subject expansion, has been directed to multi-modal transshipment of goods and commodities - particularly those commodities which realize benefits of access and proximity to the river - i.e. energy products, grain, fertilizers, etc. Commodities noted on pages "10" and "18" of the Draft represents an estimate based on best available information available to Packer, or potential customer contacts. Coal and grain handling facilities have been designed to serve the site - however, their installation (and size) will be heavily dependent upon customer commitments, and they are further subject to appropriate permit reviews, particularly by the Minnesota Pollution Control Agency (PCA). The table on page "10" omits the estimated 50,000 tons of salt currently projected. I make the above comments to emphasize that neither the tonnage or commodity type is "fixed" at this point. I think that

27

27 the more informative information is the total tonnage estimate. While we are certain of the need for additional terminal space in the area, the final tenants are unknown to the same extent that the apartment builder is unaware of who his renters will be.

28 The draft tends to create the impression that the subject wetland area is a relatively pristine setting. While it has much potential, it is currently being abused by the public. Immediately north of the site is a sewage plant and lagoon - generating odors which are not necessarily conducive to public use of the area. The area itself has been used as a dumping site for a variety of debris; is the scene of private "beer blasts"; and is frequented by snowmobiles in winter and motorcycles in summer. Area "E", shown on page "33" of the Draft is also populated by elm trees, many of which are infected by dutch elm disease. In addition, the City of South St. Paul currently operates a "diseased tree" burning site on area "F"; shown also on page "33". We have offered to clean up area "E", to improve the backwaters area, and to dedicate a majority of area "E" to the public.

4. With respect to paragraph "4.1" on page 46:

29 The lengthy permit process, dating back to June of 1974, has imposed a severe economic burden upon Packer. Issuance of the Section 10 Permit did not give Packer full use of its property (almost 9-acres were restricted). In addition, we have been compelled to purchase an additional 50-acres, so that some 28-acres could be dedicated to the public. We have stated that the financial viability of the facility is subjected, now, to greater risk - due to inflated costs, delays, and uncertainties.

30 With respect to para. "4.4" on page "46":

We do not propose to turn 22-acres into industrial storage area. The figure on page 15 indicates that over 7.5 of these acres will be utilized as a surface drainage detention/storage basin.

31 With respect to para. "4.6" on page "46":

The conclusion that the fill constitutes the removal of a final buffer in view of our proposal to fence and plant the proposed dike is purely conjecture.

32 With respect to para. 4.10 on page 47:

The conclusion that the Packer facility "will" lure business away from existing terminals is an assumption at best.

33 With respect to para. "4.11", on page 47:

Conclusions as to the direction of movements are conjecture. There would likely be deviations to the patterns.

28. We have attempted to describe the wetland as it exists today. In paragraph 2.54, page 35, we have noted that the wetland has little value for recreational use other than for bow fishermen and bird watchers. The only recent dumping that we have observed is by the city of South St. Paul at the tree-burning site. Even if the area were dedicated to the public and the debris removed, it is unlikely that the area will ever be a highly used recreation area.

29. The purpose of this document is to assess the environmental effects, both beneficial and adverse, of the proposed fill activity. It is noted in paragraph 4.24, page 52, of the final EIS that the primary purpose of the project is to enhance the financial stability of Packer.

30. The referenced paragraph has been altered to reflect this (paragraph 4.4, page 48, of the final EIS).

31. The area to be filled presently acts as a visual and noise buffer between the area to be dedicated and the existing Packer operation. The proposed dike, even if planted and fenced, would not provide the same buffer to anyone recreating on the dedication parcel.

32. The word "will" has been changed to "may" in the referenced paragraph. We believe that the potential exists for the Packer operation to lure away business if it is more competitive than existing terminals.

33. These are not conclusions but assumptions made to assess the impact of the Packer operation on barge traffic. We recognize that these assumptions would not be valid in all instances, but are simplifications made to show the general barge traffic patterns in the Twin Cities area.

9. With respect to "economic effects" noted on page 49: The draft goes to great extent to review the Packer proposal, not only in view of the expansion area, but also the existing facility. This is not the case with economic impacts, with the result that they have been downplayed in the consideration. The City of South St. Paul has endorsed the project in view of its economic plight with the loss of employment and tax base in the meat packing industry. The entire project proposal, including the current expansion, anticipates the creation of 150 construction jobs, 118 operating jobs (Packer), and 90 jobs in related industry. It also anticipates annual property taxes of from \$190,000 to \$500,000, depending upon the ultimate level of site use and development. A review of benefits and costs by Packer, indicated a benefit/cost ratio in the area of 4.7:1.

34. The growth of river transportation in the area has been of the magnitude of 600,000 tons per year. Such growth must be served by modern and efficient multi-modal facilities, or a profusion of smaller operations.

10. With respect to adverse impacts noted on page 59 of the Draft: Paragraph 5.5 indicates that minor increases in traffic, barge and rail, are adverse. This is certainly judgmental.

35. Paragraph 5.5 implies, again, that 22 acres are "lost" without consideration of the fact that the 7.5 acre detention pond has been designed to, and should be capable of maintaining or improving the water quality function of the wetlands lost. The loss of flood water storage is virtually negligible.

37. Paragraph 5.6 talks again of the loss of the buffer area and habitat diversity. For all practical purposes this was lost when the Section 10 permit was issued. Other studies, by Packer, do not agree that the loss of the habitat value of the area proposed to be filled is of the significance noted here. In this case, I am concerned that the area has been viewed as if in a vacuum.

11. With respect to Alternatives noted on page 60: Neither alternative noted considers the fact that the surface drainage/detention pond would then not be constructed. Such a facility, beyond its normal water quality functions, also provides a means to minimize the hazards of on or off-site spills or accidents. The discussion of alternatives is difficult when a facility is already in existence. The planning function requires that today's investments take

34. The EIS contains a review of the existing facility to relate to reviewers of this document the existing setting of the proposed project. The discussion of impacts is limited to the proposed expansion. It may appear that economic impacts receive less consideration due to the fact that economic effects can be stated in dollars and numbers of jobs, which are easily understood by everyone. On the other hand, impacts in other areas such as air quality usually require a longer discussion as the public is not as familiar with these subjects.

34a. Your comment implies that large multi-modal terminals are preferable to a number of smaller terminals. This may or may not be true. The economics of the river transportation business will determine how transportation needs are met. Investors will promote the type of terminals that return the most on their investments.

35. 1-494 and Concord Street are heavily used at the present time. A minor increase in truck traffic must be considered a minor adverse effect from the standpoint of safety and congestion. Additional barge traffic would result in the need for additional lockages and fleeting areas which we believe is an adverse impact.

36. Section 5 of the EIS outlines the unavoidable adverse impacts associated with the project. The loss of the 22 acres of wetlands and the functions they perform is an unavoidable impact. Paragraphs 1-27, 1-28, 4-35 - 4-47, and 4-54 address the fact that the loss of the water quality function of the wetland can be mitigated by the detention basin.

37. We agree that the construction of the Section 10 facility resulted in the loss of some buffer area. However, this does not negate the fact that additional buffer area would be lost via the proposed fill.

38. If the 404 permit is denied and Packer is limited to the Section 10 facility, they still will be required to develop means within the limits of the facility to control surface runoff and spilled materials. This control is mandated by special conditions (g) and (k) of the Section 10 permit issued to Packer.

38 | future growth and/or expansion into account. It is our
| opinion that the subject expansion area is essential to
| our long-term viability.

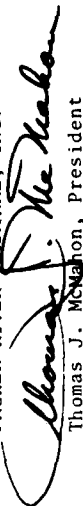
39 | 12. With respect to para. 7.4 and 8.2 on page 62:
| The detention pond is designed to maintain water quality
| aspects of the lost wetlands - and flood storage losses
| are negligible.

I had also asked Barton-Aschman Associates to review the Draft and to provide me with their comments. Rather than elaborate those comments in this letter, I have attached their response for your information.

If you should have any questions with regard to the comments made herein, please feel free to contact me.

Respectfully,

PACKER RIVER TERMINAL, INC.



Thomas J. McMahon, President

TJM/dab

Attach: Barton-Aschman comments

xc: J. W. Lambert
T. Murray

39. Paragraph 7.4 is addressing the possible long-term effect if the site were no longer operated as an industrial/commercial site. The wetland would still be filled but there are no guarantees that the detention basin would remain operable as proposed. Paragraph 8.2 is addressing the fact that, once filled, the area is permanently converted from wetlands to upland.

MAY 16 1977

Barton-Aschman Associates, Inc.
Ten Cedar Square West, Cedar Rapids, IA 52404 612-332-0421

MEMORANDUM TO: Tom McMahon, Packer River Terminal, Inc.

FROM: Barton-Aschman Associates, Inc.

DATE: May 13, 1977

SUBJECT: DRAFT ENVIRONMENTAL IMPACT STATEMENT - BARGE TERMINAL EXPANSION

We have reviewed the Draft Environmental Statement on the proposed project and have several comments:

1. No Build Alternative (Section 6.1-6.3).

40a No documentation is presented in the Draft EIS to support the contention that, if the permit is denied, "the 22 acres of wetlands would remain intact and would continue to serve their present functions." The wetlands exist in an industrial park having substantial undeveloped acreage. With additional interruption of groundwater and/or additional increases in the rate of runoff and sedimentation, it is unlikely that the present functions of the wetlands will occur indefinitely without some type of management. It cannot be assumed that the wetland will deter water pollution in the future on a par with a retention facility which is properly designed and maintained. The statement is made that "Denial of permit application would not preclude Packer from pursuit of other alternatives discussed in this section." While this statement may be true in theory, denial of the permit may, in fact, preclude the pursuit of other alternatives by the applicant. This is so indicated by Packer in the EIR.

2. Selection of Alternatives to the Proposed Action.

41 There is no discussion as to how alternatives presented in Section 6.0 were determined. For example, some process evidently occurred by which alternative sites in the metro area were dismissed as being unreasonable. While we do not dispute that decision, we should like to know the criteria that were employed.

3. Partial Expansion into the Wetlands (Section 6.4-6.5).

42 This alternative proposal would allow Packer to fill approximately 4 acres of wetlands. The statement is made that ".... the remaining 18 acres of wetlands would continue to serve their natural functions." As in (1) above, no documentation is provided for this assertion.

Corps Responses to Packer River Terminal, Inc.

40a. While it is true that the wetlands lie at the edge of an industrial area, the off-site drainage area for the wetlands is only 12.8 acres, 8.4 acres of which are already developed. It is unlikely that development of the remaining 4.4 acres would alter the ability of the wetland to serve its present functions. The Section 10 permit is conditioned to require that Packer treat on-site runoff so that it meets applicable water quality standards. Thus, if on-site runoff from the Section 10 facility is discharged to the wetland, it will be of relatively good quality. We do not foresee any development taking place in the area that would interrupt groundwater flows to the wetland to the extent that it would lose its wetland character.

40b. It is not assumed that the wetland does now or would in the future deter water pollution to the extent that a detention basin would. If the permit is denied, it is our estimation that the wetland will continue to perform its present functions in a similar manner in the foreseeable future.

40c. This is noted in the referenced section (paragraph 6.2, page 63

41. The staff of the St. Paul District asked Packer to comment on and discuss a number of these alternatives, including the alternative metropolitan site. Packer did this, and a number of these alternatives, including the alternative metro site option, were not discussed in the EIS as they are not considered reasonable and/or feasible alternatives to the proposed action. The alternative metro site is not considered reasonable because Packer already has a barge slip and terminal at the South St. Paul site. Packer would be required to spend approximately \$850,000 above proposed project costs to develop at an alternative metro site.

42. See response to comment 40a above.

4. Deferment of Development (Section 6.6).

43 This alternative does not appear reasonable because it requires that any future growth of the facility be based on speculation rather than planning. The Rock Island Railroad has indicated their property is not available based on a response to an inquiry by Packer. Even if the land were available, Packer would have to determine if development of that property is feasible vis-a-vis the operational characteristics of the present facility.

5. Technical Appendix (Table 4-a).

44 In this table of evaluation factors, there are several determinations which we feel should be reexamined on the basis of information presented in the Draft EIS.

Item I.A.6, Sedimentation Patterns. The proposed action is evaluated as having no appreciable effects on sedimentation patterns. In reference to the proposed retention facility, however, section 4.40 indicates that the efficiency of sediment collection will improve by 5-10%. In view of water quality problems in this pool of the Mississippi River and the desirability of preventing sedimentation in the backwater, we suggest that this effect is both appreciable and beneficial.

45 Item I.A.10, Storage areas for storm and flood waters. The proposed action is rated as adverse. Yet Section 4.55 makes no mention of the proposed retention facility and its impact on storm and flood waters.

46 Item I.D.2, Water Circulation. The proposed action is evaluated as having no appreciable effects. We see no reason that the proposed connection of various backwater segments would not increase water circulation. With respect to the backwater, we consider this effect appreciable and beneficial.

47 Item III.A.3, Impact on movement into and out of feeding, spawning, breeding and nursery areas. We agree with this determination but not for the reasons given in Section 4.53. The proposed action should be evaluated against existing conditions rather than alternative uses of the property (i.e. managed fish hatchery). If a comparison between alternatives is being made, one could just as easily compare the proposed action with the no action alternative. In the proposed action, the obstacle to fish movement would be removed and thus additional spawning area would be made available. Under the latter alternative, as defined in Section 6.0, the obstacle would not be removed. When compared in this fashion, the proposed action is clearly beneficial with respect to fish movement to potential spawning grounds.

48 On the other hand, if one evaluates the proposed action against existing conditions, it is equally clear that the feeding and movement of terrestrial animals will be impeded by the proposed action. Feeding grounds will be eliminated and access to the backwater area for animals will be more restricted than at present.

Corps Responses to Packer River Terminal, Inc. (cont.)

43. This is pointed out in items 3 and 4, under "disadvantages" in paragraph 6.6, pages 60-62, of the draft EIS and paragraph 6.6, pages, 63-64 of the final EIS.

44. The wetland at the Packer site plays two roles in regard to sedimentation. It traps sediments carried by runoff water from its watershed area and it traps sediments carried by Mississippi River floodwaters. The proposed detention basin may be designed to effectively offset the loss of the wetland as a sediment trap for urban runoff, but the wetland would still be lost as a sediment trap acting on Mississippi River floodwaters. Therefore, we believe there would be no net appreciable effect.

45. The primary concern in this instance is not with storm water but with floodwaters. The detention basin is designed to retain storm waters from a small urban watershed just prior to their entry into the Mississippi River. As most storm events occur outside of the flood season, there is no real benefit in detaining these waters for flood protection reasons. On the other hand, filling of the wetland would result in a minor loss of floodplain area which serves a floodwater storage function during high water periods on the Mississippi River.

46. We are of the opinion that the proposed connection of the two backwaters would have negligible water circulation benefits at best, since the backwaters would still remain unconnected with the river during most of the year.

47. With the proposed plan, the obstacle (the road) would be removed, but the potential spawning site (Area C) would be filled.

48. This is noted in paragraphs 4.52-4.53, on page 60.

Corps Responses to Packer River Terminal, Inc. (cont.)

49. Item III.A.4. has been changed to no appreciable effect for the same reasons outlined in response number 42 above, as the water quality function of this wetland appears to be closely linked with its sediment-trapping capacity. Item III.A.5. is considered a minor adverse effect for the same reasons outlined in response number 43 above.
50. Item III.B.3 was changed to reflect effects upon existing fisheries rather than potential effects if the road were removed under the no action alternative.

Item III.A.4 and III.A.5. These sections appear to draw a distinction between the water quality maintenance and water retention functions of a wetland versus the functions provided by a designed retention facility. 49 Based on our review of the available research, the net results appear to be comparable in both cases. We would appreciate any additional information which documents these evaluations.

50 Items III.B.3 and III.B.4. These items appear to be general conclusions with respect to the overall impact on fisheries and wildlife. We would agree that the impacts to wildlife will generally be adverse. However, by our comments on Section 4.53 and other comments given above, we feel it is inappropriate to form the same general conclusion with respect to fisheries.

DJL/da

TECHNICAL

**A
P
P
E
N
D
I
X**

**ST. PAUL DISTRICT, CORPS OF ENGINEERS
DEPARTMENT OF THE ARMY**

DRAFT
ENVIRONMENTAL IMPACT STATEMENT

TECHNICAL APPENDIX

TABLE OF CONTENTS

<u>EXHIBIT</u>	<u>TITLE</u>	<u>PAGE</u>
1	Letter Regarding Endangered Species from the Fish and Wildlife Service	A-1
2	Letter of Coordination from State Historic Preservation Office	A-2
3	Letter from the Environmental Protection Agency Recommending Denial of Permit	A-3
4	Section 404(b) Evaluation	A-5



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Federal Building, Fort Snelling
Twin Cities, Minnesota 55111

IN REPLY REFER TO:
AFA-SE

APR 1 1977

Colonel Forrest T. Gay, III
District Engineer, St. Paul District
Corps of Engineers
Department of the Army
1135 U. S. Post Office & Custom House
St. Paul, Minnesota 55101

Dear Colonel Gay:

In your letter of March 14 (NCS-ED-ER), you requested information on potential impacts that filling 22 acres of wetlands would have on endangered species. We are unaware of any currently listed threatened or endangered species inhabiting the proposed Packer River site.

If we can be of further assistance, please advise.

Sincerely yours,

Raymond L. St. Ores
Acting Assistant
Regional Director

Exhibit 1

A-1



MINNESOTA HISTORICAL SOCIETY

690 Cedar Street, St. Paul, Minnesota 55101 • 612-296-2747

15 January 1976

Colonel Max W. Noah
District Engineer
St. Paul District
Corps of Engineers
1135 U.S. Post Office and Custom House
St. Paul, Minnesota 55101

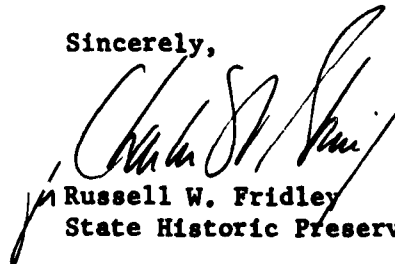
Attention: Permits and Statistics Branch

Dear Colonel Noah:

RE: NCSCO-S-1111(A-751)
Parker River Terminal
Deposit of fill
Mile 831.7 Mississippi River
South St. Paul

Both the Survey and Planning and the Archaeology sections of the Minnesota Historical Society have reviewed the project described above. This review finds that the proposed project will not affect known sites of historic or archaeological value. I concur with that conclusion.

Sincerely,



Russell W. Fridley
State Historic Preservation Officer

RWF/fr

cc: Dr. Elden Johnson
State Archaeologist
200 Ford Hall
University of Minnesota
Minneapolis, Minnesota 55455

Exhibit 2 - n JAN 19



UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION V
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

FEB 17 1977

Colonel Forest T. Gay III
District Engineer
U.S. Army Engineer District, St. Paul
1135 U.S. Post Office & Customhouse
St. Paul, Minnesota 55101

Dear Colonel Gay:

An Environmental Assessment Report related to an application for a section 404 permit by Packer River Terminal, Inc., South St. Paul, Minnesota, was sent to us on January 28, 1977, by Mr. Thomas J. McMahon. Public Notice of this application for section 404 permit, Number A(751), was published by your office on December 23, 1975.

We have reviewed the information presented in the Assessment Report, and it is our opinion that the Report, plus other information which was submitted to us prior to the preparation of the report, provides us with sufficient information to evaluate the proposed project.

Based upon available information, we have concluded that violations of applicable air, water or noise standards by the proposed facility, can be avoided by the utilization of existing technology and controls through the various required licenses and permits. The use of an appropriate level of control technology will undoubtedly be required by other Federal and State regulatory programs.

The proposed project will result in the loss of approximately 22 acres of wetland habitat. This destruction of wetlands is in direct conflict with EPA's Policy to Protect the Nation's Wetlands, as published in the May 2, 1973 Federal Register (38 F.R. 10834). In addition, this proposal does not satisfy the criteria of section 5(b)8 of the Guidelines for Evaluating the Proposed Discharge of Dredged or Fill Material in the Navigable Waters (40C.F.R. 230) (40C.F.R. 230).

We do not believe that the preparation of an Environmental Impact Statement (EIS) will generate any additional information which might alter our conclusions concerning this project. However, as you know, the final determination to prepare an EIS is your decision as dictated by your agency's guidelines and the National Environmental Policy Act (P.L. 91-190).

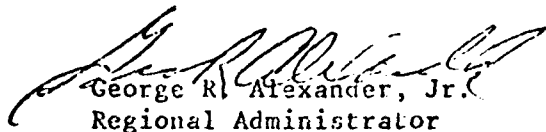
In conclusion, due to the unacceptable loss of wetlands and their associated bio-productivity which will result from the proposed work, we must recommend that Packer River Terminal's application for a section 404 permit be denied.

FEB 17 1977

-2-

If you have any questions concerning our position on this matter, please contact Mr. Donald A. Wallgren of my staff at (312) 353-2300.

Sincerely yours,


George R. Alexander, Jr.
Regional Administrator

Section 404(b) Evaluation

The following is an evaluation of the proposed fill activity in accordance with the requirements of Section 404 of the Federal Water Pollution Control Act Amendments of 1972 (PL 92-500). The evaluation was done in accordance with the Environmental Protection Agency guidelines published in the 5 September 1975 Federal Register (40 CFR 230).

If there is an impact from the proposed fill upon a given parameter in the table below, it is noted where a discussion of that impact is found in the final environmental impact statement.

Table 4-a
Section 404(b) Evaluation Factors

		PROBABLE IMPACTS	
		BENEFICIAL	ADVERSE
		NO APPRECIABLE EFFECTS	
I. Physical Effects			
A. Potential destruction of wetlands-effects on:			
1. Food chain production			4.51
2. General habitat			4.48-4.53
3. Nesting, spawning, rearing and resting sites for aquatic or land species			
4. Those set aside for aquatic environment study or for refuges		X	
5. Natural drainage characteristics		X	
6. Sedimentation patterns		X	
7. Flushing characteristics		X	
8. Current patterns		X	
9. Wave action, erosion or storm damage protection		X	
10. Storage areas for storm and flood waters			4.55
11. Prime natural recharge areas		X	
12. Cumulative effects of alterations			
B. Impact on water column			
1. Reduction in light transmission		X	
2. Aesthetic values		X	
3. Direct destructive effects on nektonic and planktonic populations		X	
C. Covering of benthic communities			
1. Actual covering of benthic communities		X	
2. Changes in community structure or function		X	
D. Other effects			
1. Changes in bottom geometry and substrate composition		X	
2. Water circulation		X	
3. Exchange of constituents between sediments and overlying water with alterations of biological communities		X	

PROBABLE IMPACTS
NO APPRECIABLE

BENEFICIAL EFFECTS ADVERSE

II. Chemical - Biological Interactive effects

- A. Water column effects of chemical constituents
- B. Effects of chemical constituents on benthos

X

X

III. Selection of Disposal Sites

- A. Impacts of fill on chemical, physical and biological integrity of aquatic ecosystem

- 1. Impact on food chain
- 2. Impact on diversity of plant and animal species
- 3. Impact on movement into and out of feeding, spawning, breeding and nursery areas
- 4. Impact on wetland areas having significant functions of water quality maintenance
- 5. Impact on areas that serve to retain natural high waters or flood waters

X

X

4.53

X

4.55

- B. Impacts on water uses at proposed fill site

- 1. Municipal water supply intakes
- 2. Shellfish
- 3. Fisheries (including mitigation)
- 4. Wildlife (including mitigation)
- 5. Recreation activities
- 6. Threatened and endangered species
- 7. Benthic life
- 8. Wetlands
- 9. Submerged vegetation
- 10. Size of disposal site
- 11. Cultural resources, scenic and conservation values

X

X

X

4.50-4.52

4.6

X

X

4.48-4.55

X

1.24

4.5-4.7

IV. Navigation Impacts

- A. Impairment to maintenance of navigation
- B. Economic impact on navigation and anchorage

X

X

V Consideration to Minimize Harmful Effects

As the proposed activity involves the filling and total destruction of wetlands, little can be done to minimize the impact of this specific action. The employment of proper construction techniques can minimize the effect upon adjacent areas during the construction phase.

The applicant proposes to compensate for the adverse effects of the proposed fill in two ways. First, a water retention basin has been incorporated into the design of the facility. The purpose of this basin is to replace the urban runoff treatment function of the wetland proposed for filling. As designed, the basin should be able to perform this function as well as or better than the wetland area proposed for filling.

Second, the applicant proposes to create open areas in the forested wetland riverward of the fill area in an effort to replace the wildlife habitat values lost via filling. The modification of the forested areas would not replace the habitat value lost via the proposed fill action. The success of this proposal in providing any meaningful habitat replacement is tenuous at best.

VI Quality of Fill Material

The fill material would be taken from on site and from a commercial pit. There should be no water quality problems associated with the proposed fill material.

VII Review of State Water Quality Standards

As the proposed action solely involves the fill of wetlands with no open water disposal, there are no directly applicable water quality standards. The Minnesota Pollution Control Agency has waived water quality certification under Section 401 of PL 92-500.

VIII Discussion

Section 5(b) of 40 CFR 230 concerns "considerations relating to degradation of water uses at proposed disposal sites."

Subparagraph (8) reads:

(8) Wetlands. (i) Discharge of dredged material in wetlands may be permitted only when it can be demonstrated that the site selected is the least environmentally damaging alternative; provided, however, that the wetlands disposal site may be permitted if the applicant is able to demonstrate that other alternatives are not practicable and that the wetlands disposal will not have an unacceptable adverse impact on the aquatic resources. Where the discharge is part of an approved Federal program which will protect or enhance the value of the wetlands to the ecosystem, the site may be permitted.

(ii) Discharge of fill material in wetlands shall not be permitted unless the applicant clearly demonstrates the following:

(a) the activity associated with the fill must have direct access or proximity to, or be located in, the water resources in order to fulfill its basic purpose, or that other site or construction alternatives are not practicable, and

(b) that the proposed fill and the activity associated with it will not cause a permanent unacceptable disruption to the beneficial water quality uses of the affected aquatic ecosystem, or that the discharge is part of an approved Federal program which will protect or enhance the value of the wetlands to the ecosystem.

This is the portion of the Guidelines for Evaluating the Proposed Discharge of Dredged or Fill Material in Navigable Waters that EPA feels the proposed fill does not satisfy.